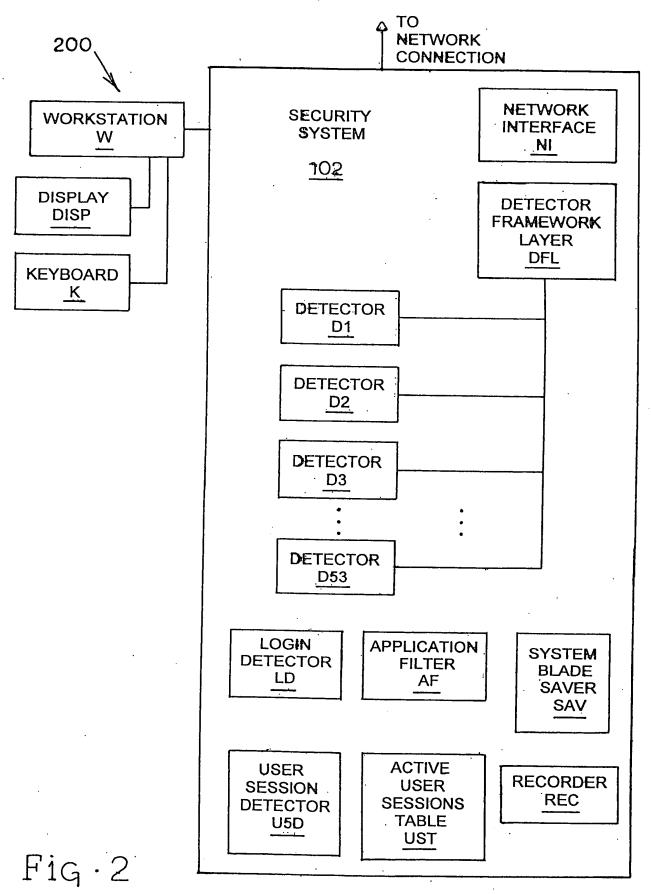
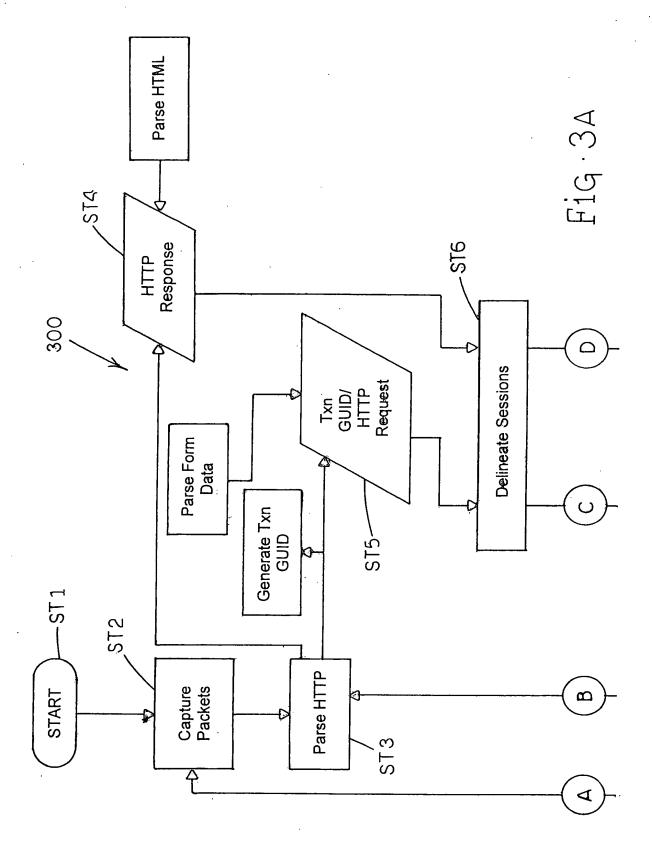
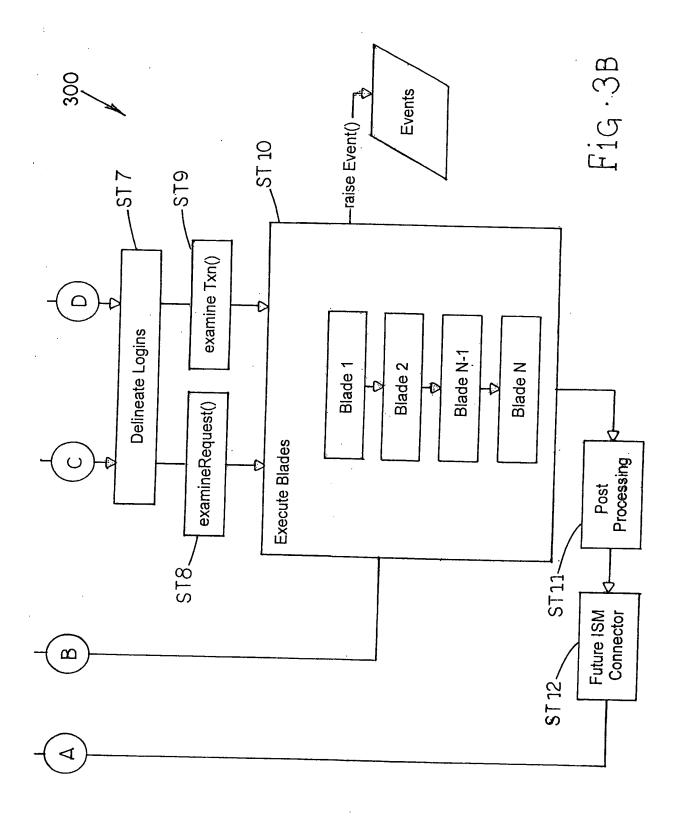


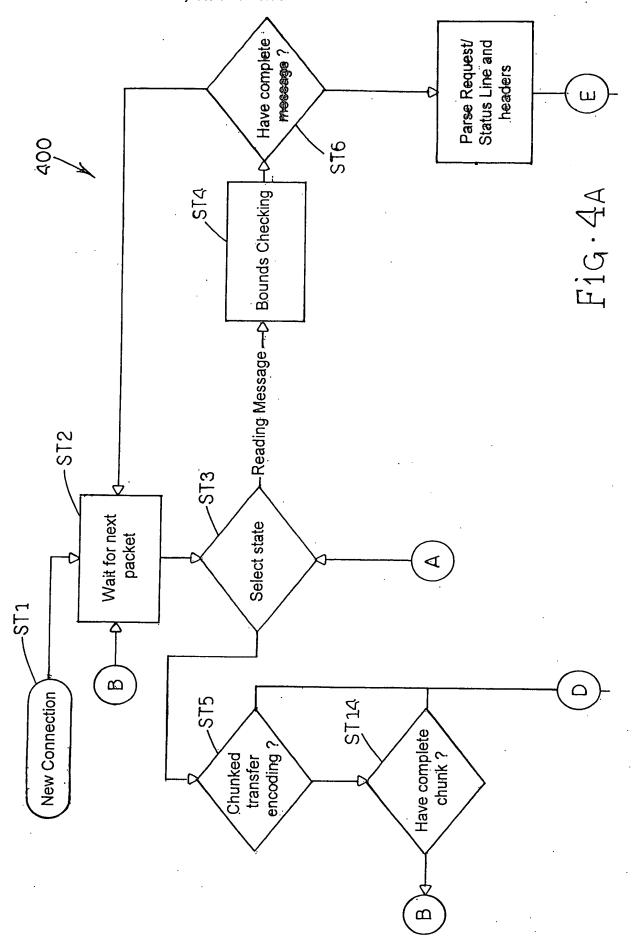
REPLACEMENT SHEET
Title: METHODS, SYSTEMS AND COMPUTER
PROGRAM PRODUCTS FOR MONITORING A
SERVER APPLICATION

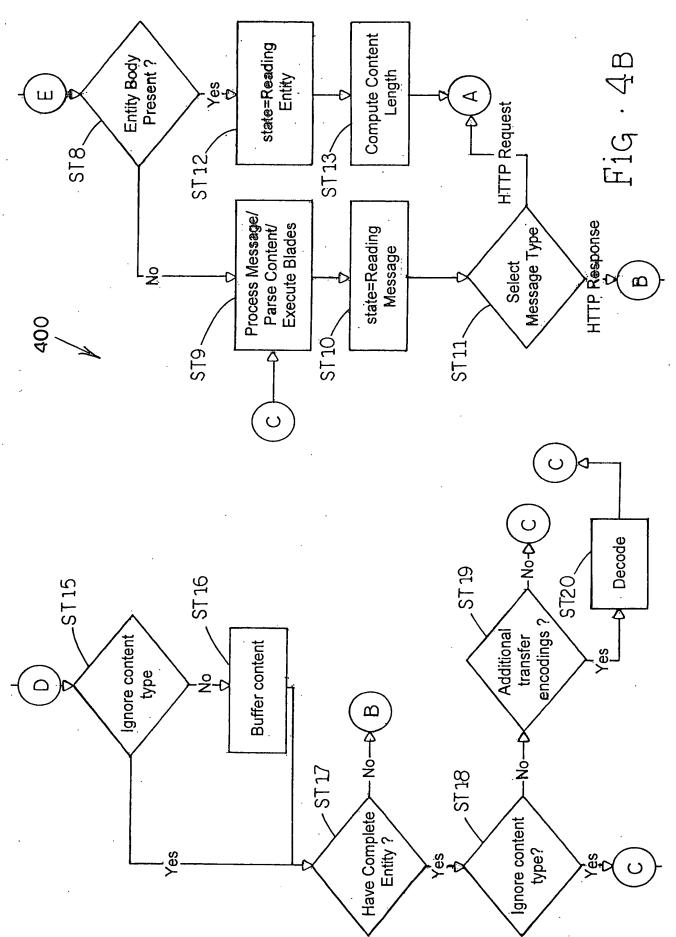
Applicant(s): Motsinger et al. Atty. Docket No.: 1503/6











REPLACEMENT SHEET
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PROGRAM PRODUCTS FOR MONITORING A
SERVER APPLICATION

SERVER APPLICATION
Applicant(s): Motsinger et al.
Atty. Docket No.: 1503/6

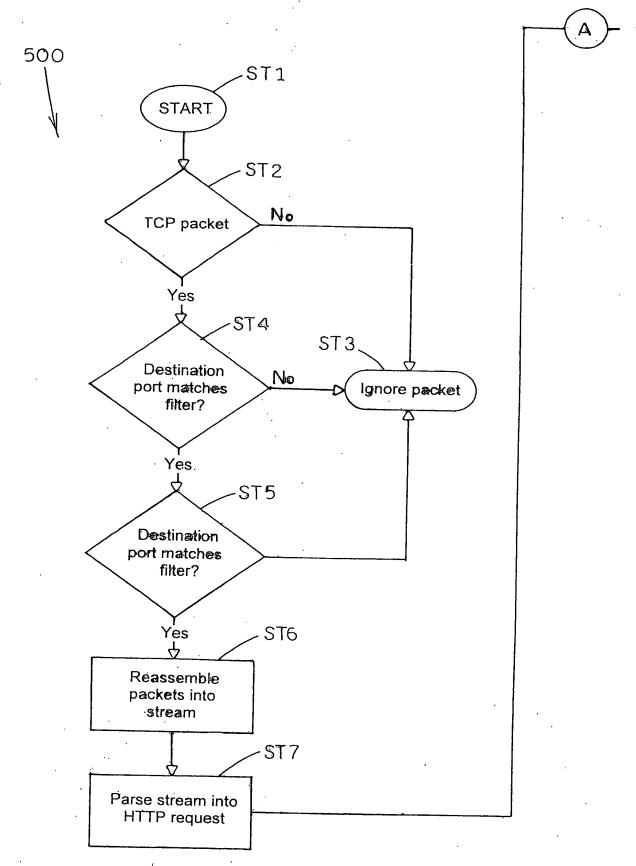
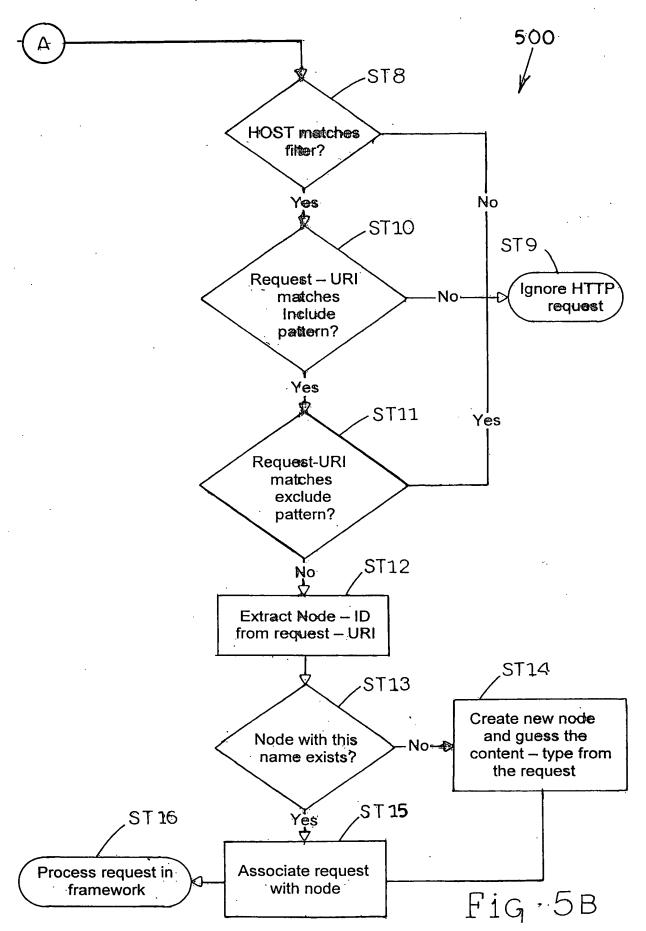


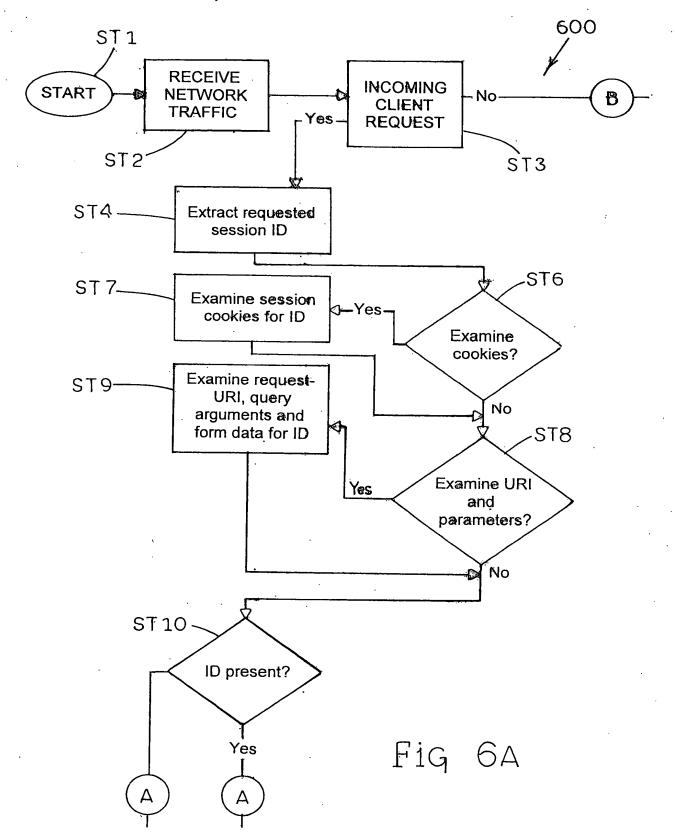
Fig.5A

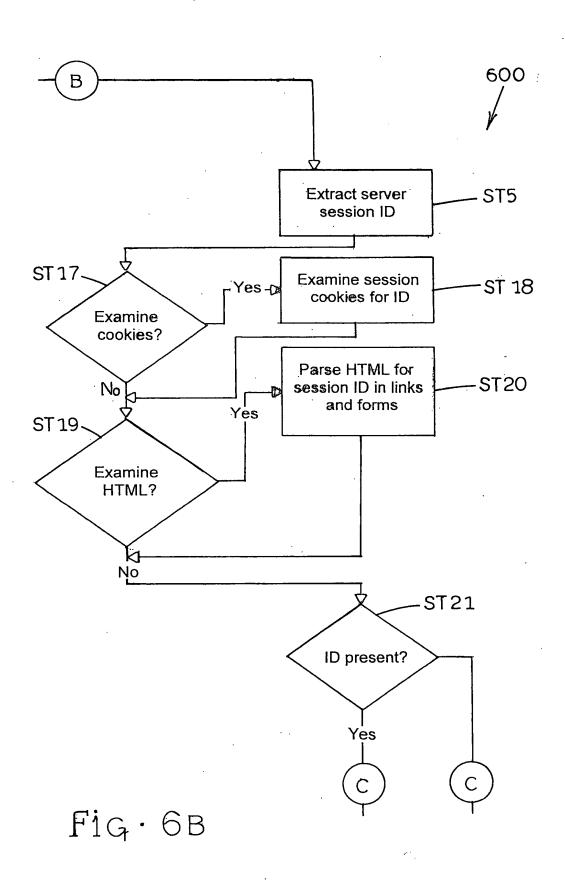
Applicant(s): Motsinger et Atty. Docket No.: 1503/6

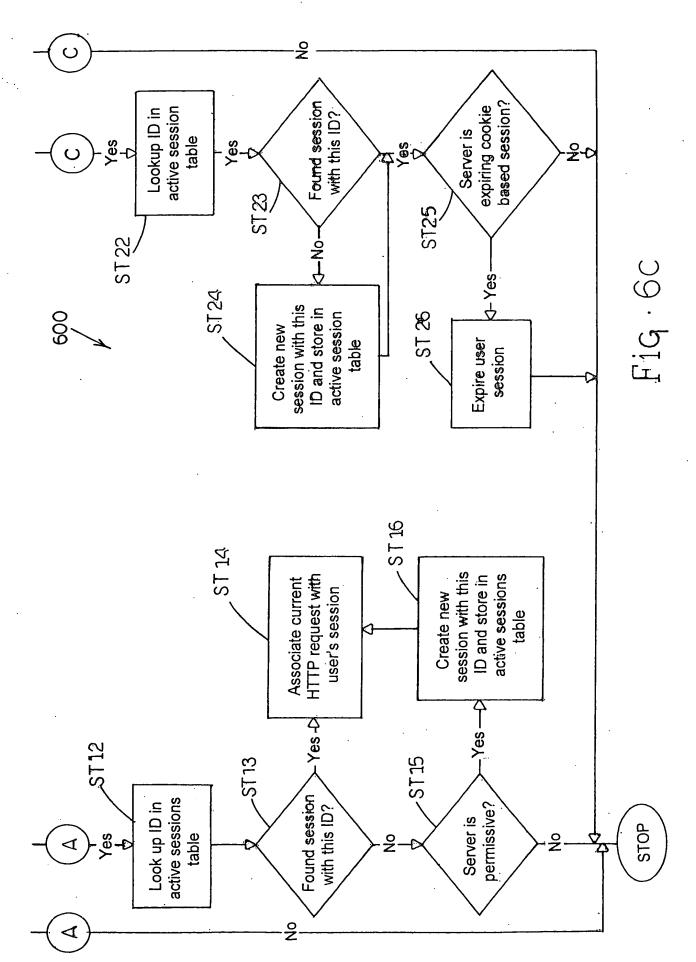


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Title: METHODS, SYSTEMS AND COMPUTER
PROGRAM PRODUCTS FOR MONITORING A

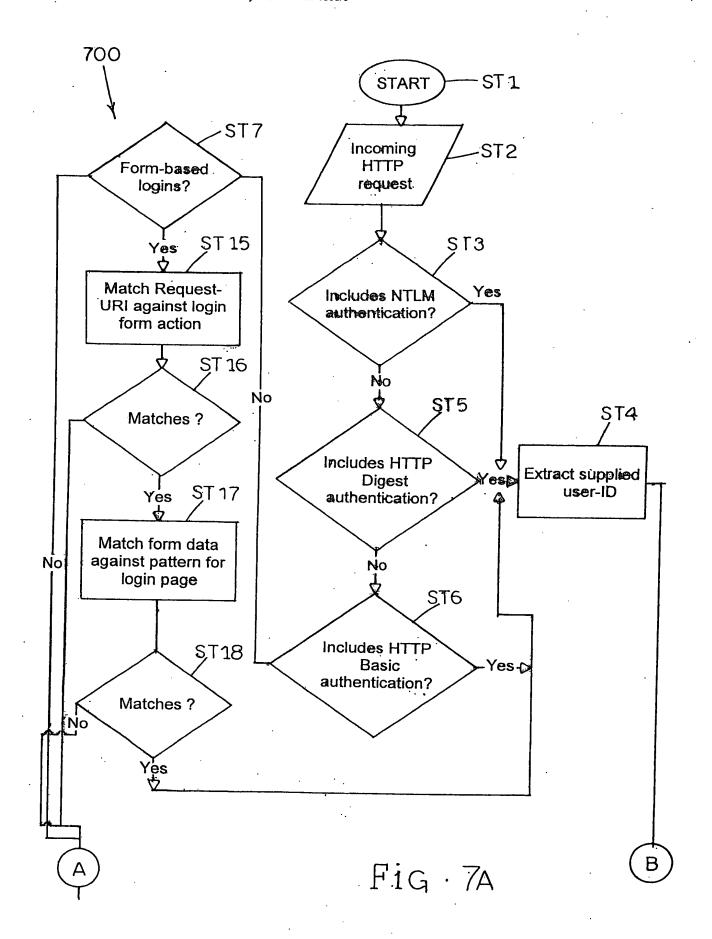
SERVER APPLICATION
Applicant(s): Motsinger et al.
Atty. Docket No.: 1503/6

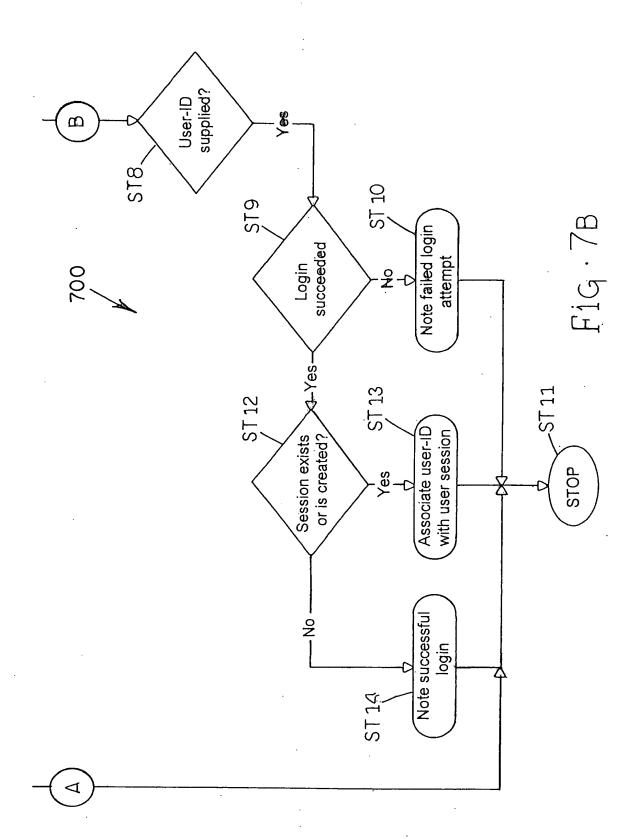






## REPLACEMENT SHEET





REPLACEMENT SHEET
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PROGRAM PRODUCTS FOR MONITORING A

SERVER APPLICATION
Applicant(s): Motsinger et al.
Atty. Docket No.: 1503/6

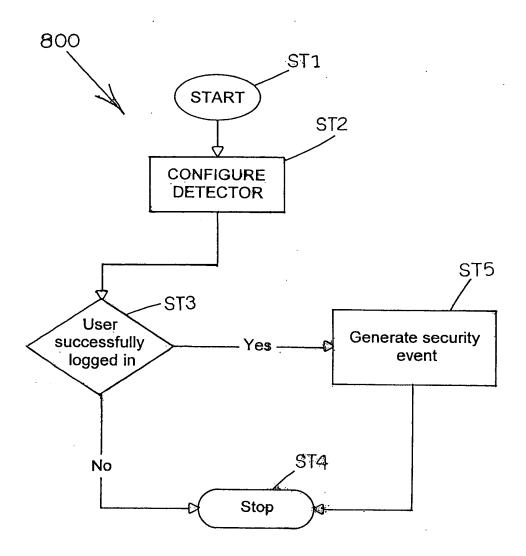


Fig.8

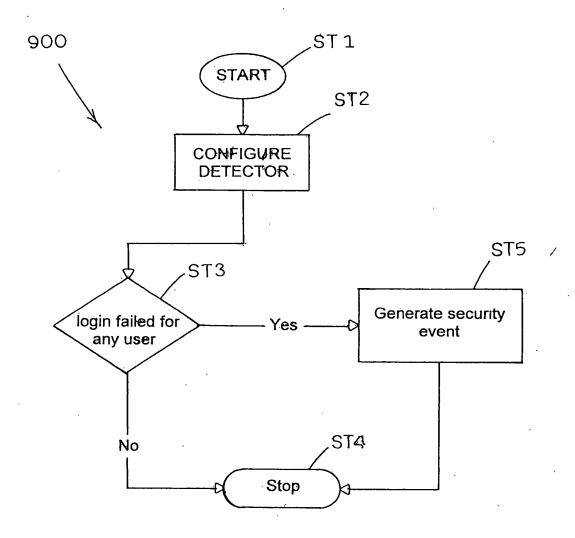
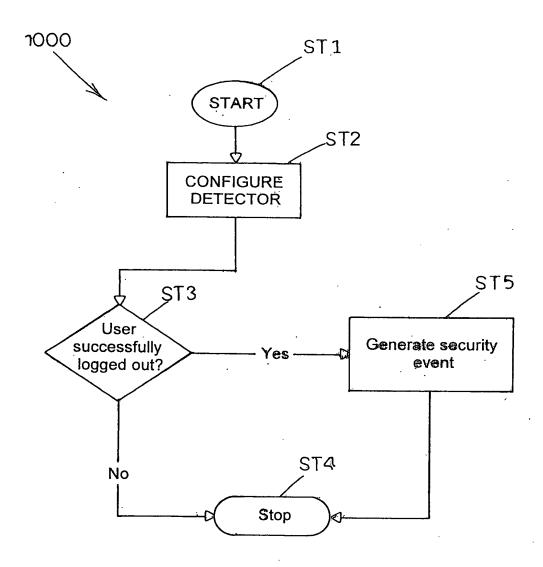


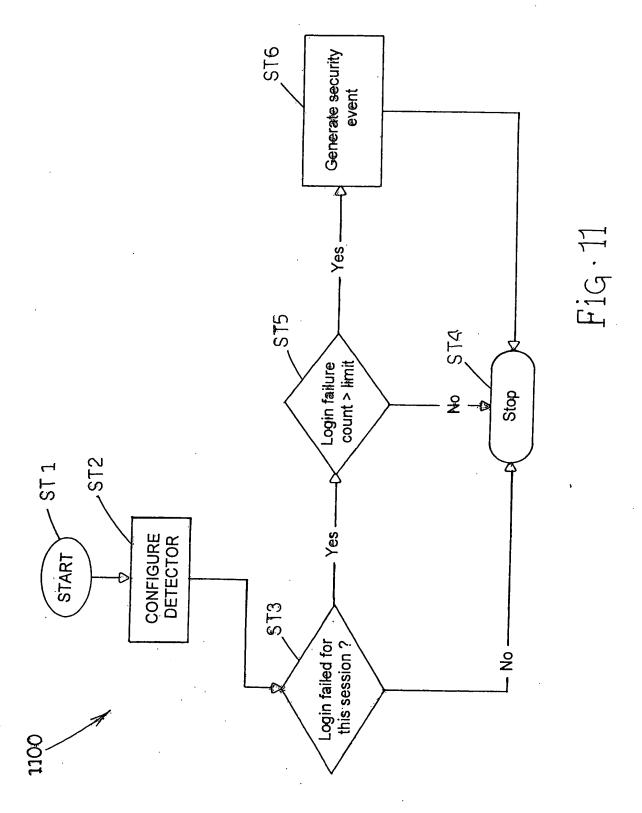
Fig. 9

REPLACEMENT SHEET
Title: METHODS, SYSTEMS AND COMPUTER
PROGRAM PRODUCTS FOR MONITORING A
SERVER APPLICATION

Applicant(s): Motsinger et al. Atty. Docket No.: 1503/6

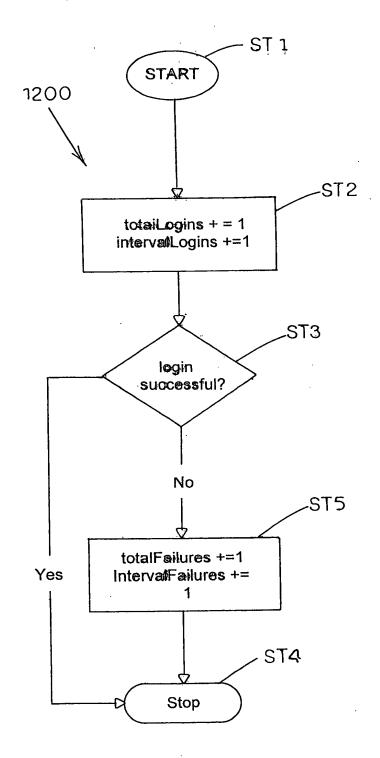


Fig·10



## REPLACEMENT SHEET Title: METHODS, SYSTEMS AND COMPUTER PROGRAM PRODUCTS FOR MONITORING A

SERVER APPLICATION Applicant(s): Motsinger et al. Atty. Docket No.: 1503/6



Fig·12A

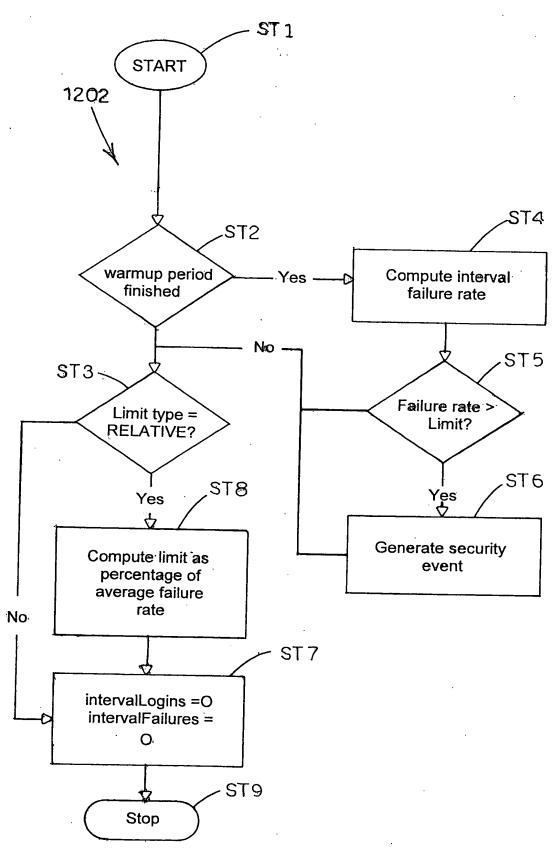
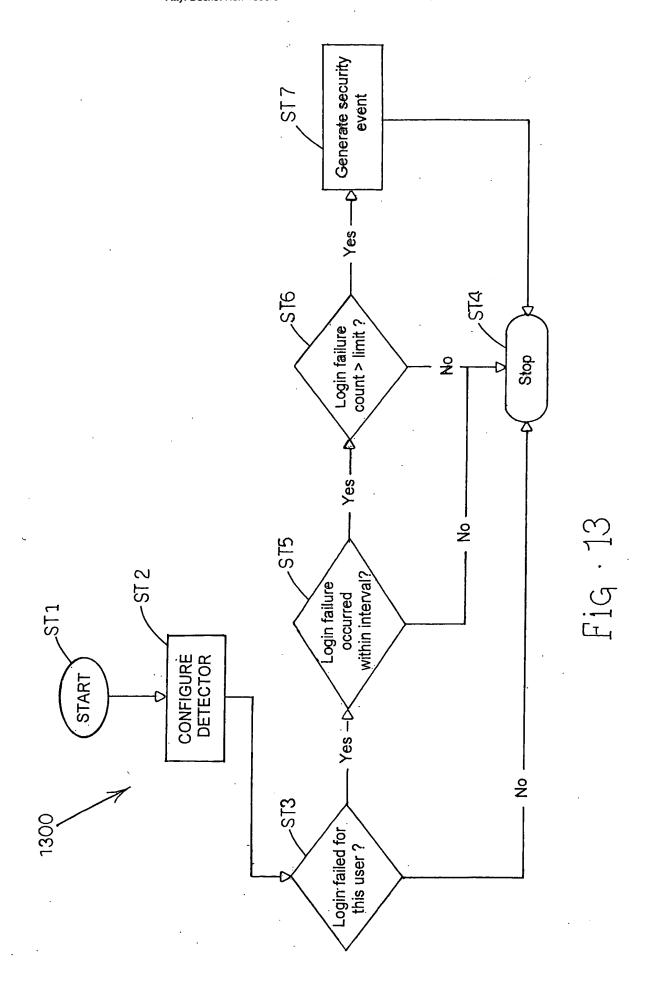
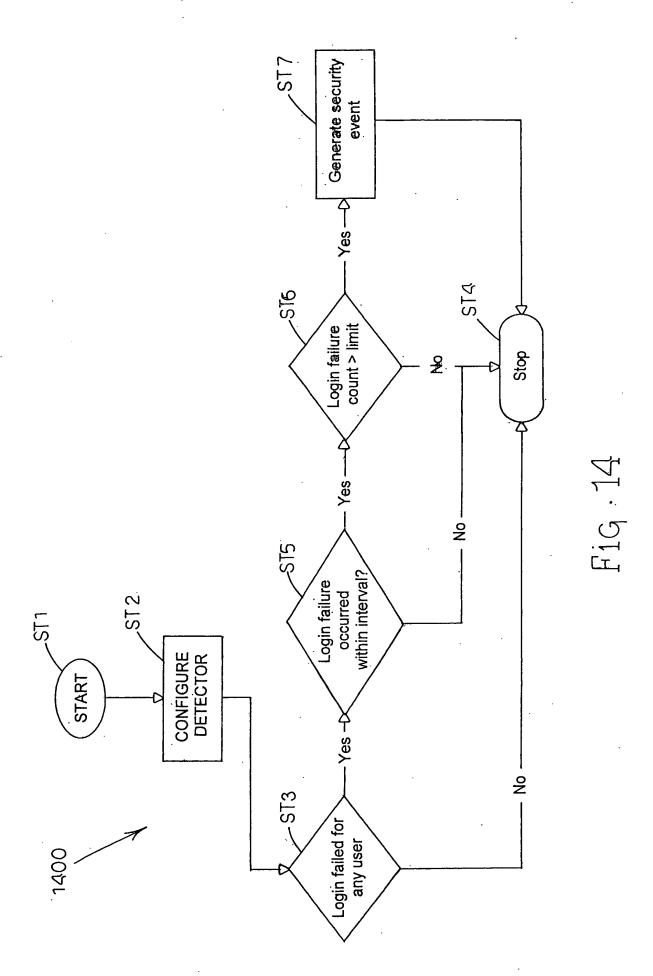
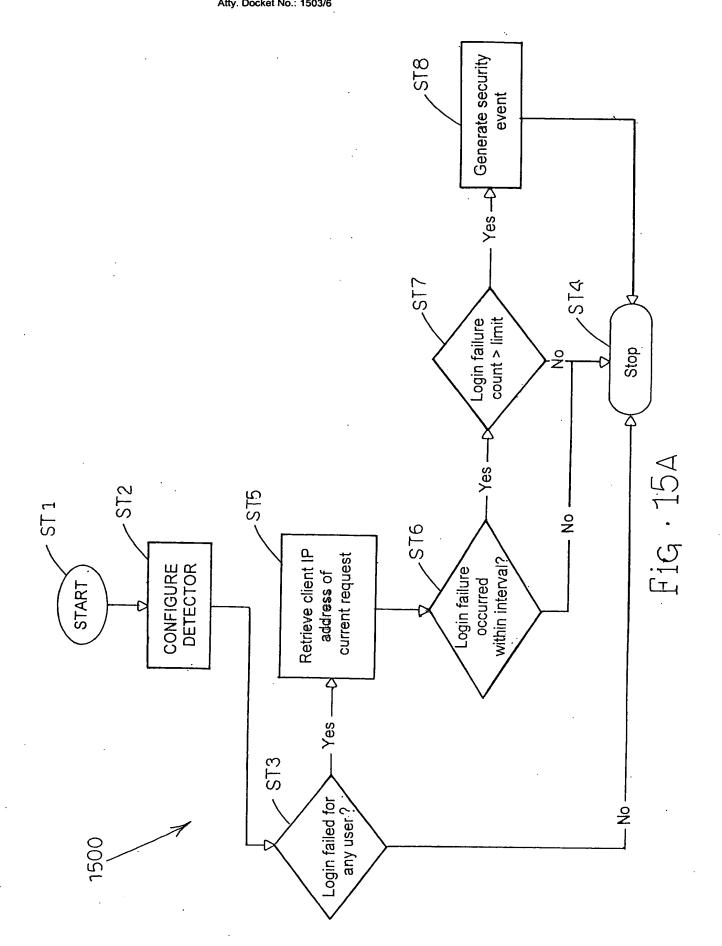
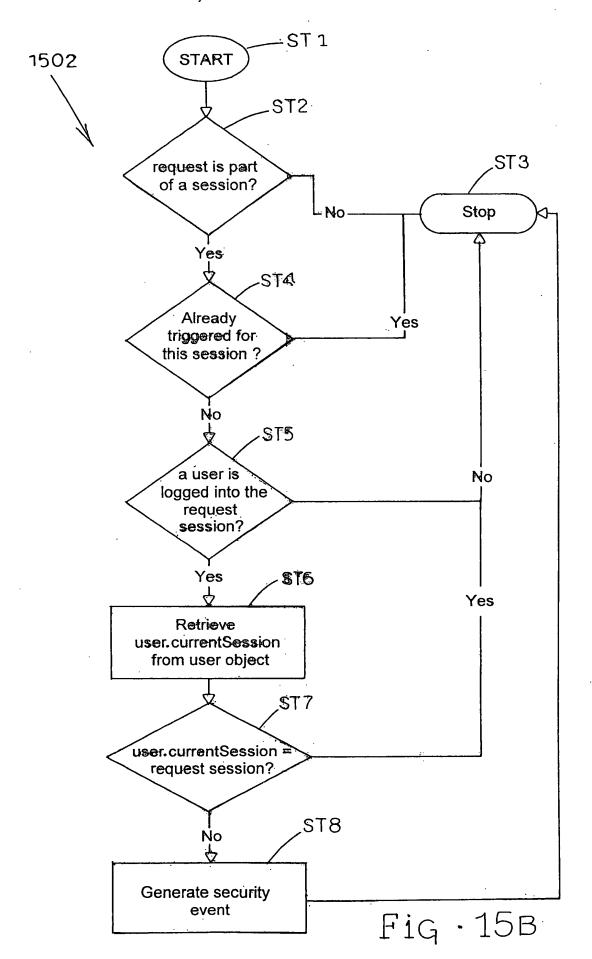


Fig.12B



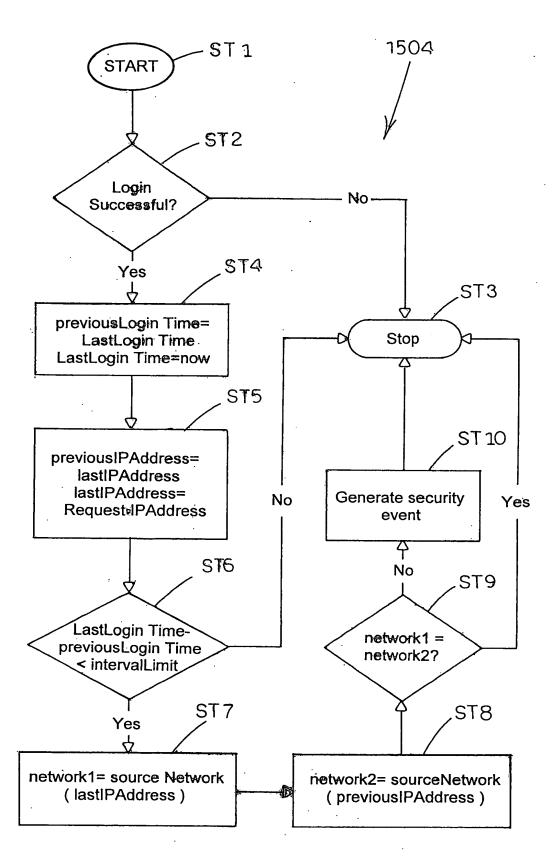






REPLACEMENT SHEET
Title: METHODS, SYSTEMS AND COMPUTER
PROGRAM PRODUCTS FOR MONITORING A
SERVER APPLICATION

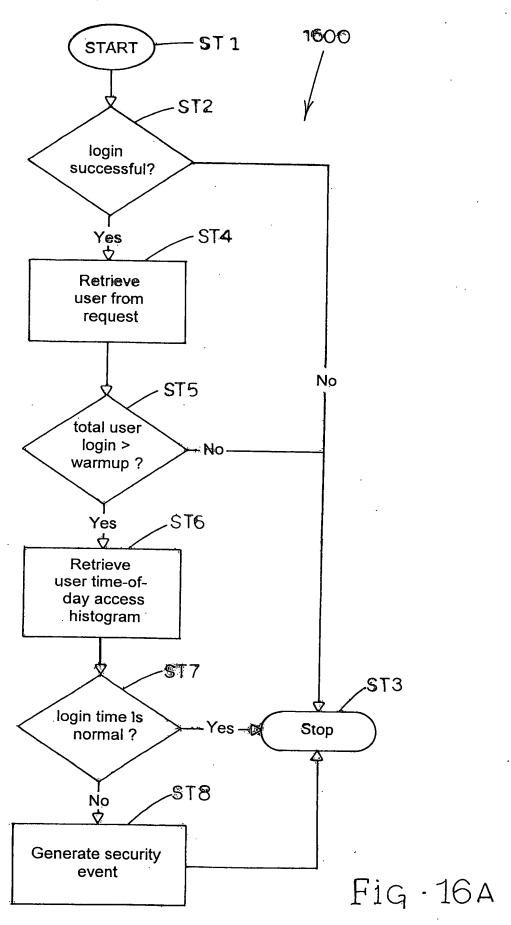
Applicant(s): Motsinger et al. Atty. Docket No.: 1503/6



Fig·15c

REPLACEMENT SHEET
Title: METHODS, SYSTEMS AND COMPUTER
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SERVER APPLICATION

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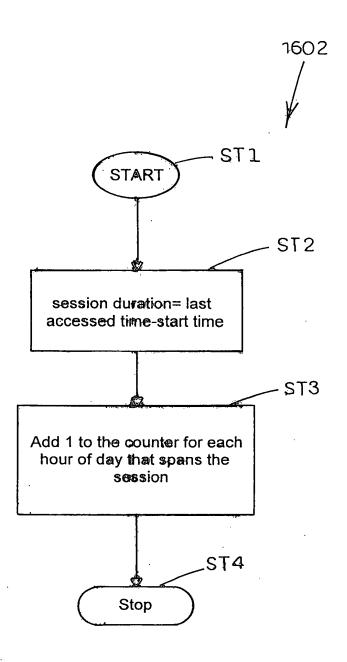
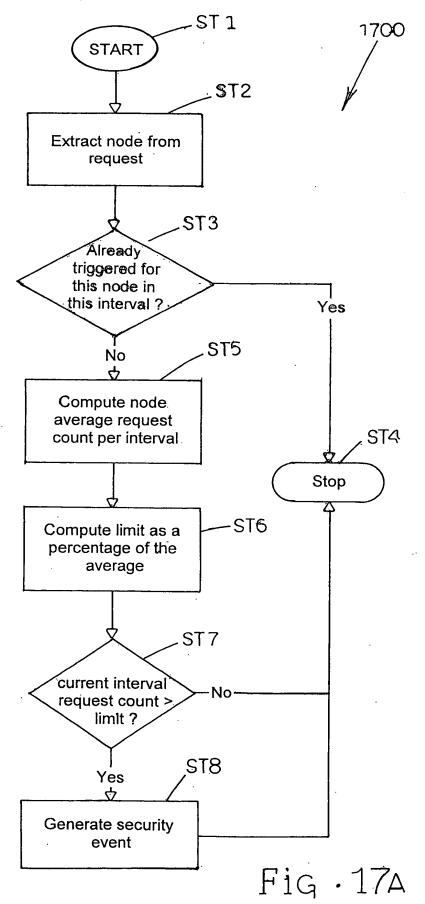


Fig 16B

REPLACEMENT SHEET
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PROGRAM PRODUCTS FOR MONITORING A
SERVER APPLICATION

Applicant(s): Motsinger et al. Atty. Docket No.: 1503/6



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Title: METHODS, SYSTEMS AND COMPUTER
PROGRAM PRODUCTS FOR MONITORING A
SERVER APPLICATION
Application (Administration of Cl.)

SERVER APPLICATION
Applicant(s): Motsinger et al.
Atty. Docket No.: 1503/6

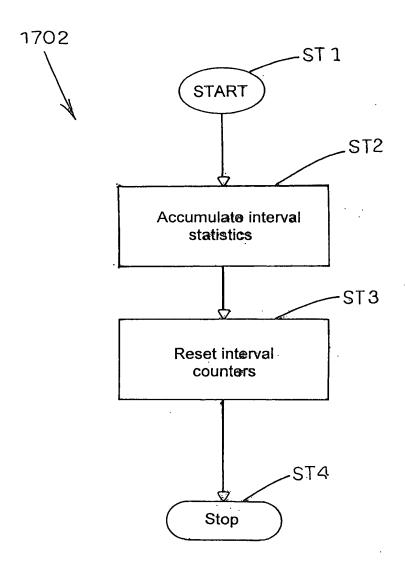
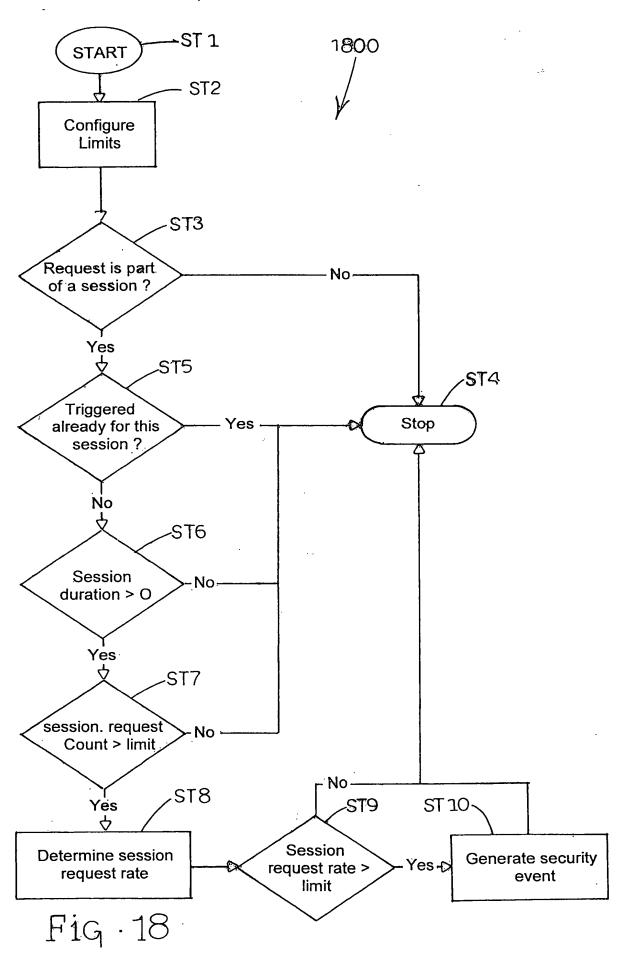
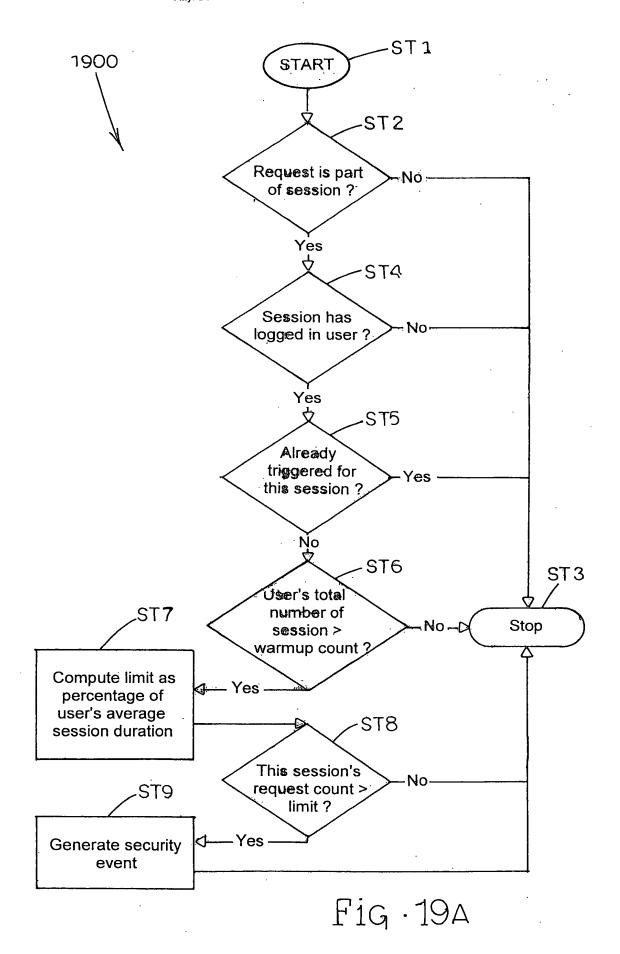


Fig · 17B



REPLACEMENT SHEET



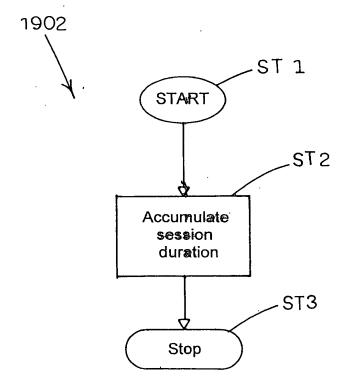


Fig · 19B

REPLACEMENT SHEET

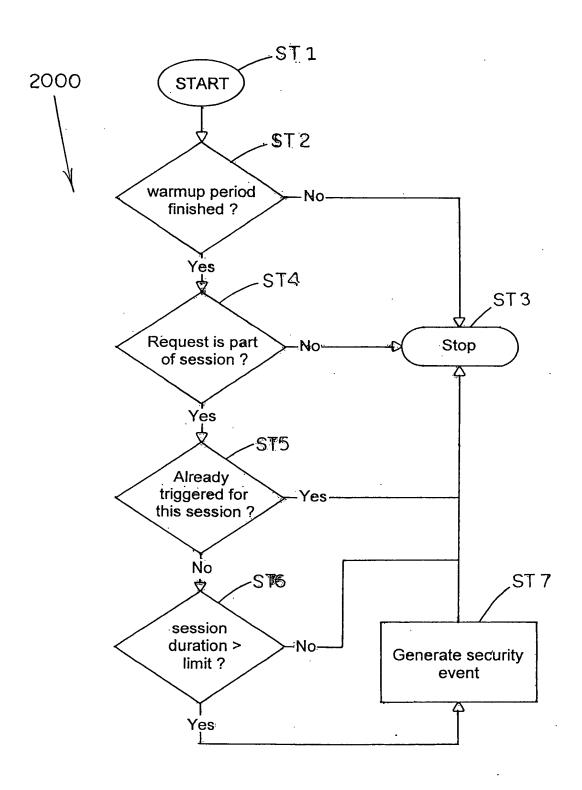
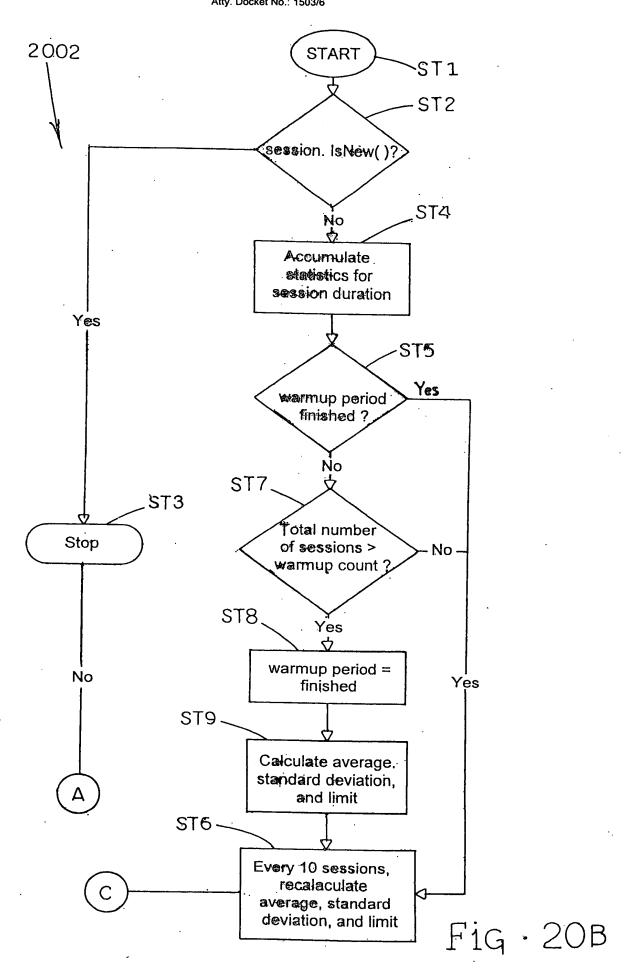
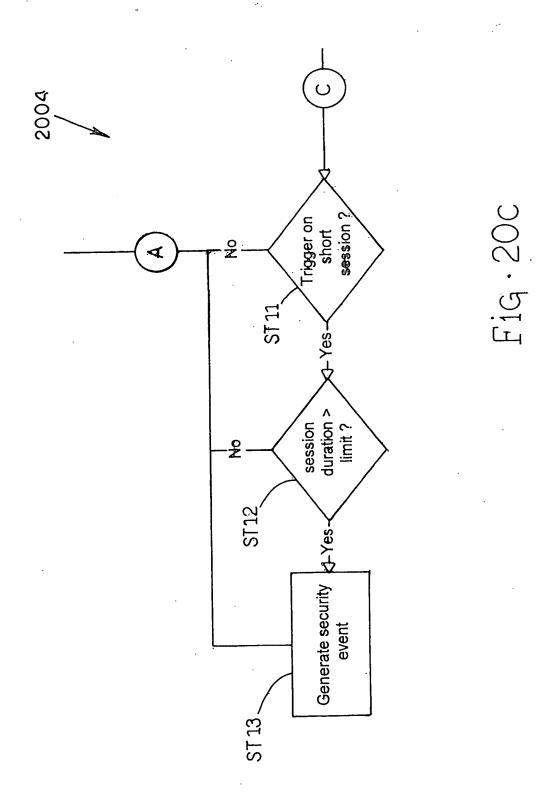
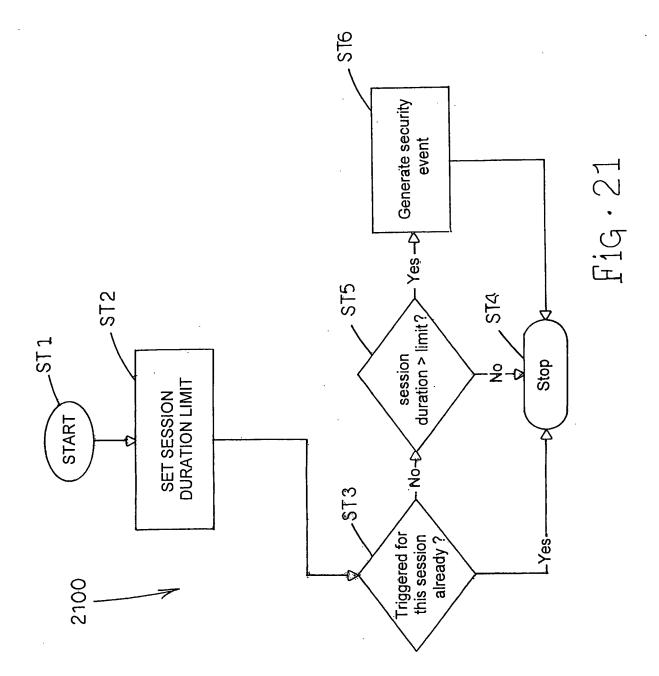


Fig · 20A







2200

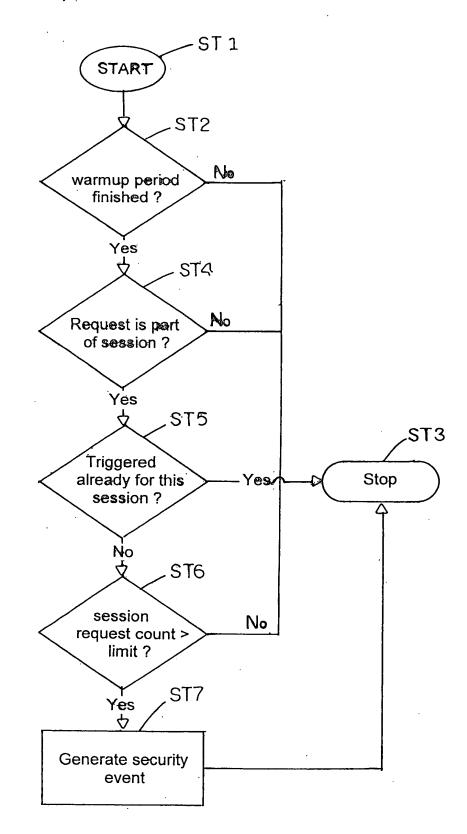
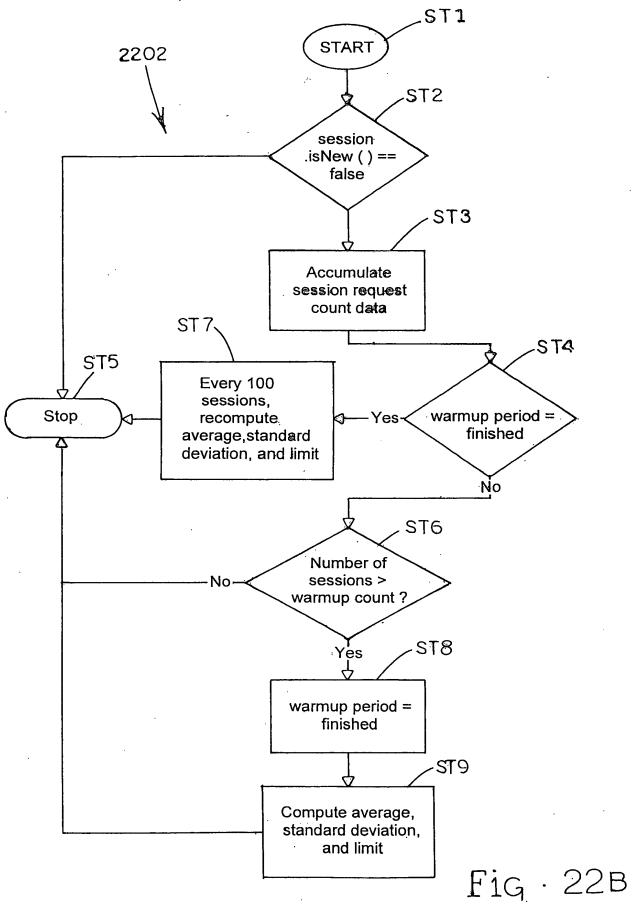
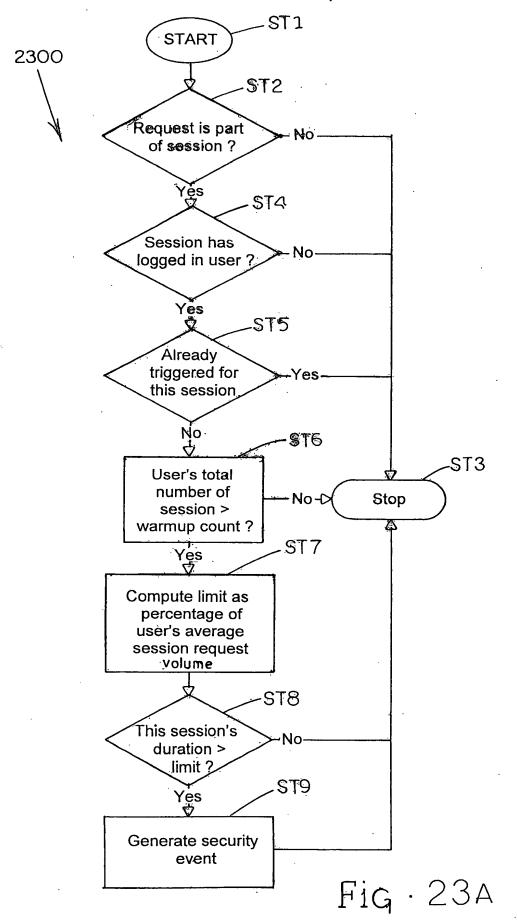


Fig. 22A

Applicant(s): Motsinger et al. Atty. Docket No.: 1503/6



Applicant(s): Motsinger et al. Atty. Docket No.: 1503/6



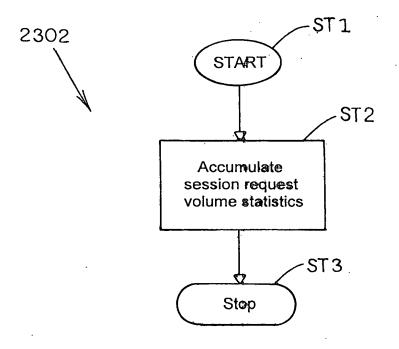
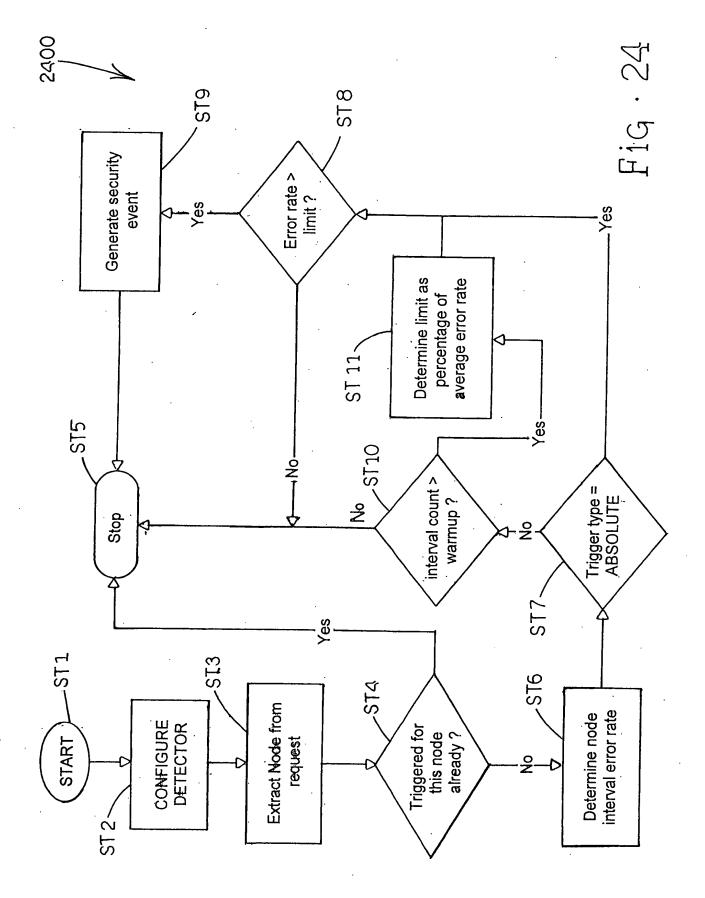
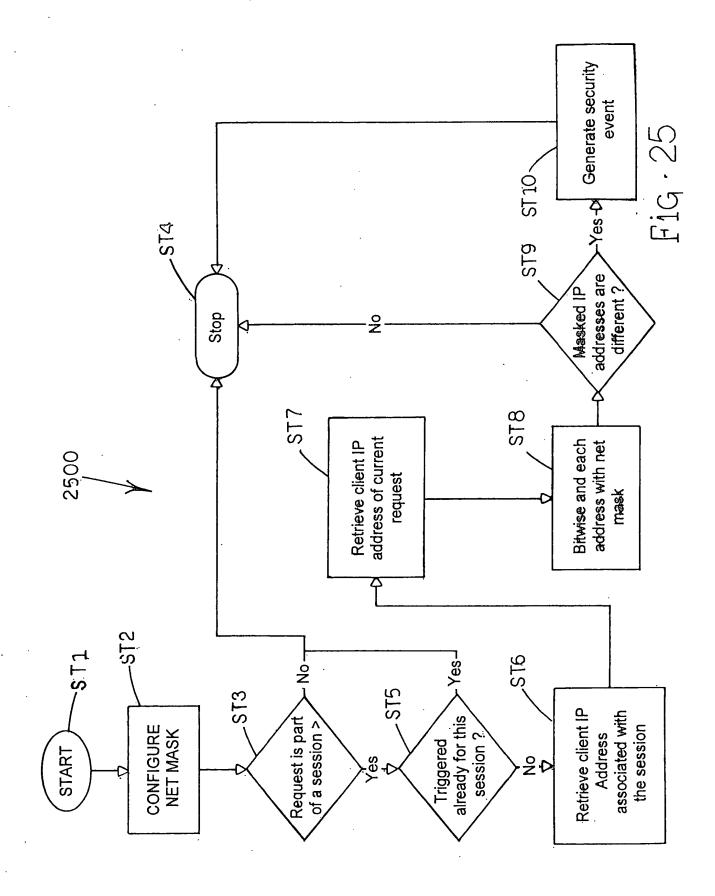
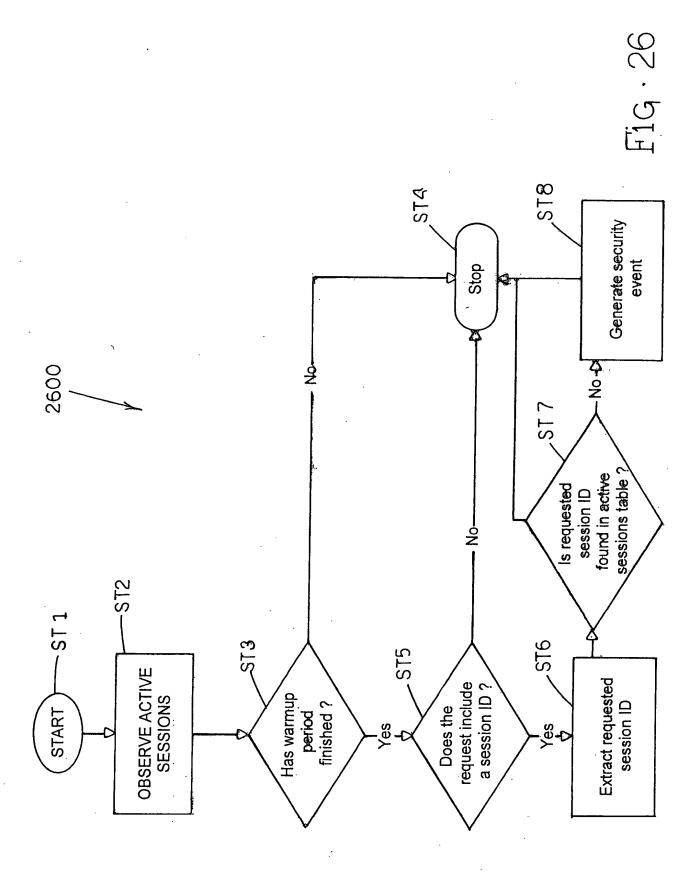
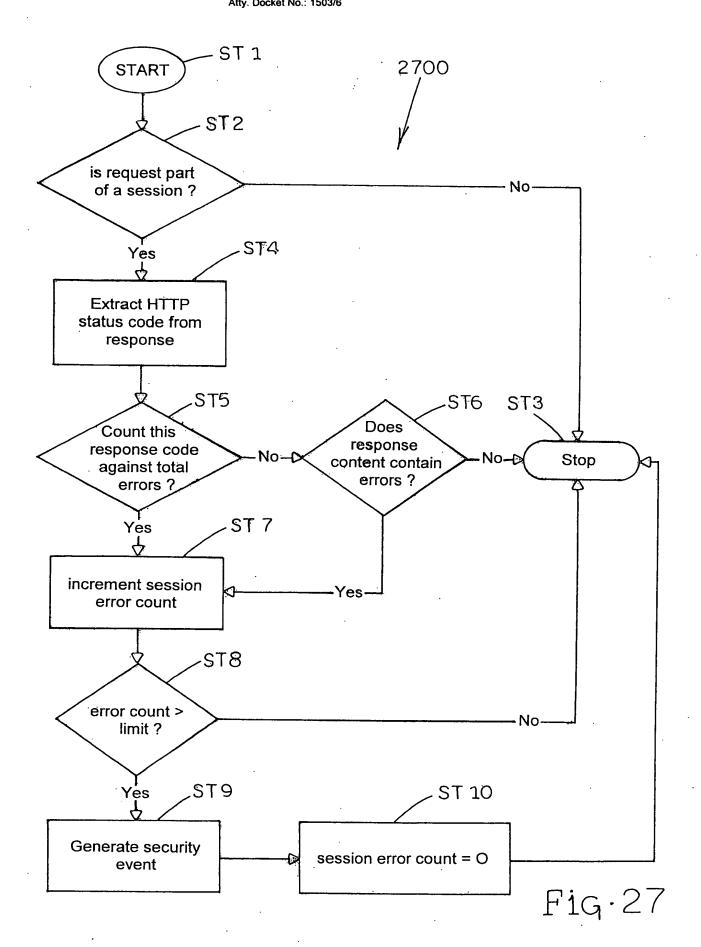


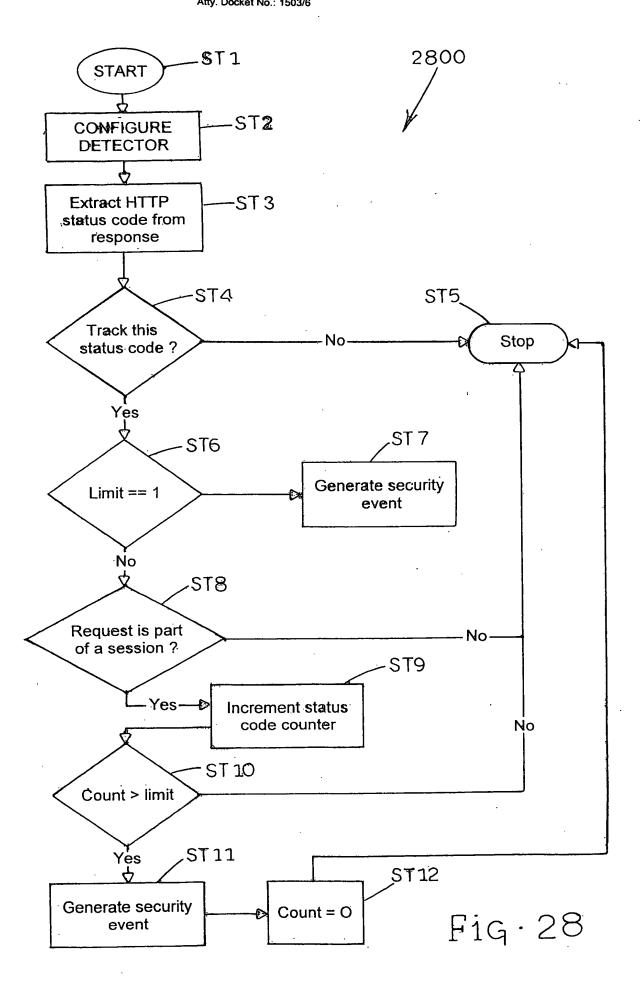
Fig · 23B



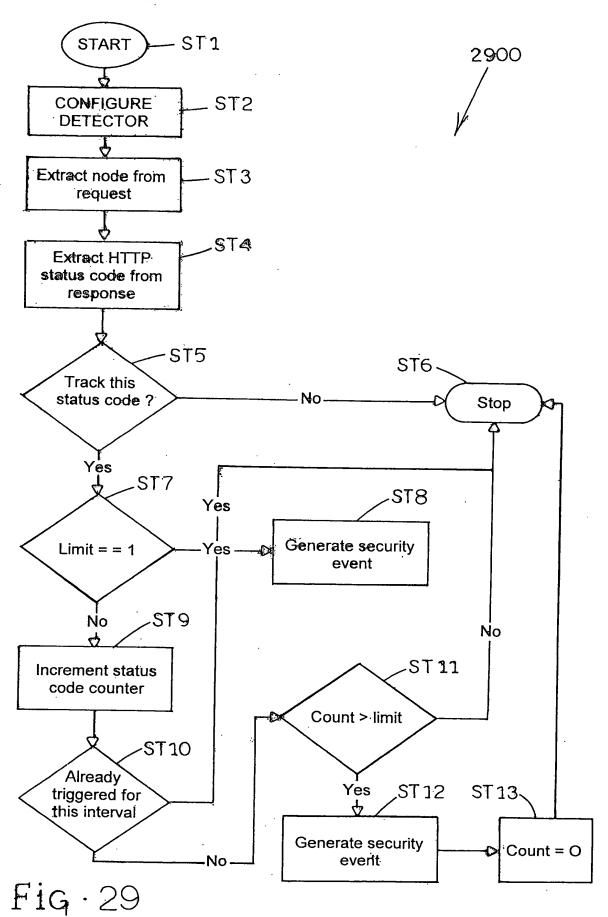


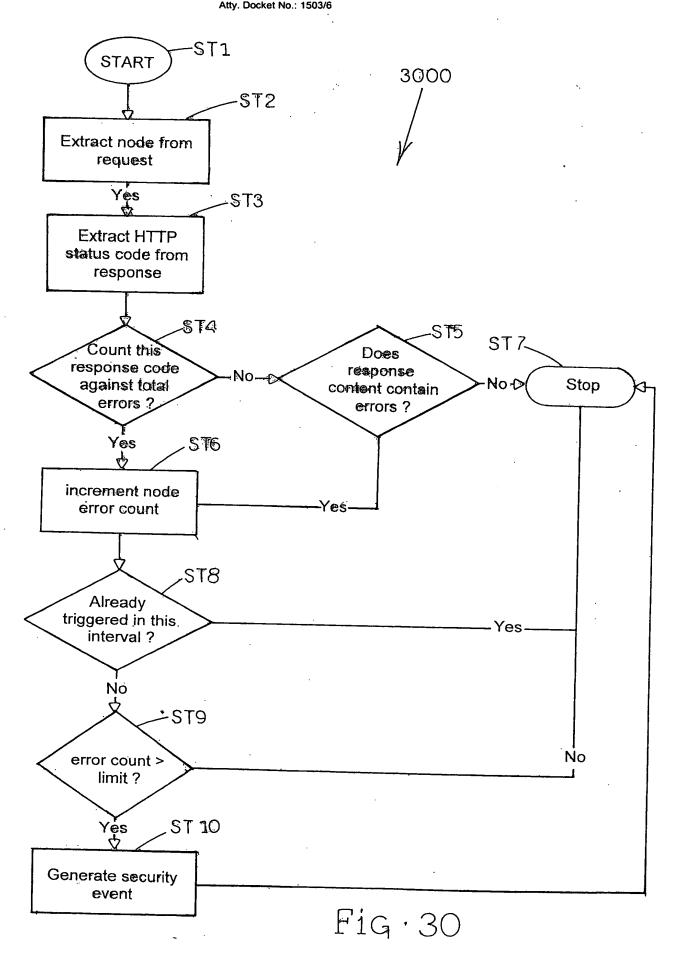






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3100 ST1 **START** ST2 **CONFIGURE DETECTOR** ST3 **Extract HTTP** method from request ST4 ST5 For each Stop suspicious method ST6 ST7

No

method =

suspicious

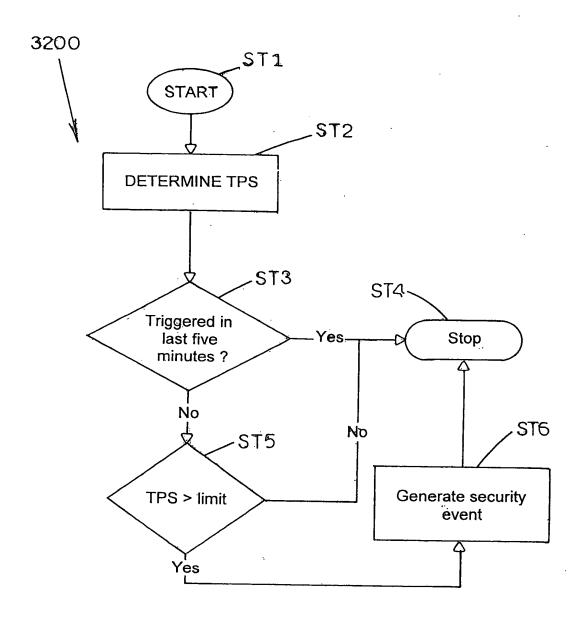
method?

Fig·31

Yes.

Generate security

event



 $Fig \cdot 32$ 

Applicant(s): Motsinger et al. Atty. Docket No.: 1503/6 ST1 START 3300 **\$T2** Request is part of a session? Yes ST4 Ϋ́ Retrieve cookies from request ST5 ·ST3 For each cookie Stop in request ST6 Look up cookie value set by server ST7 Cookie value No exists? Yes

ST8

ST9

Request value

= stored value?

No

Generate security event.

No-

Fig.33A

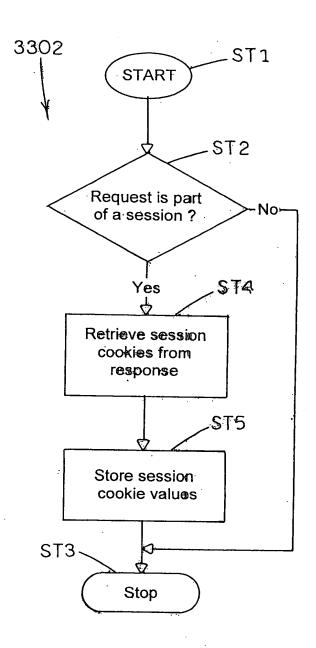


Fig · 33B

Applicant(s): Motsinger et al. Atty. Docket No.: 1503/6

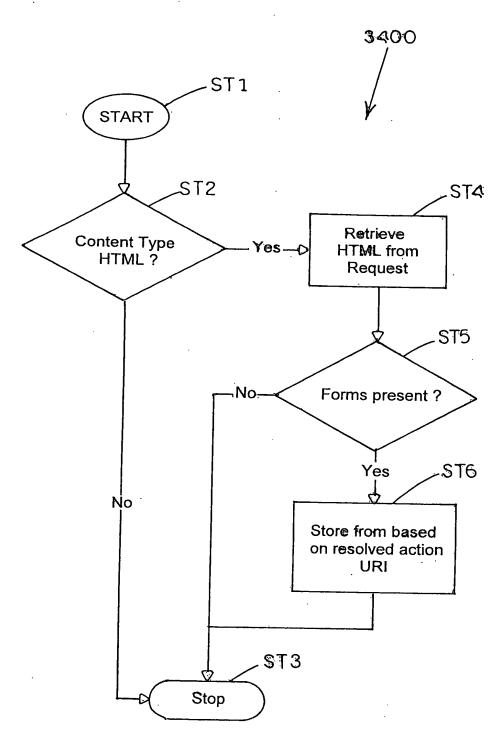


Fig · 34A

Applicant(s): Motsinger et al. Atty. Docket No.: 1503/6

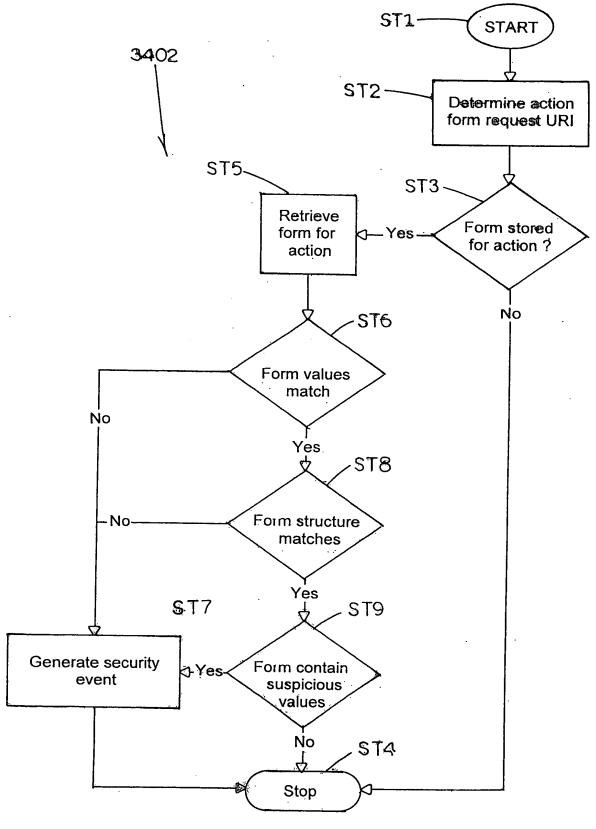


Fig · 34B

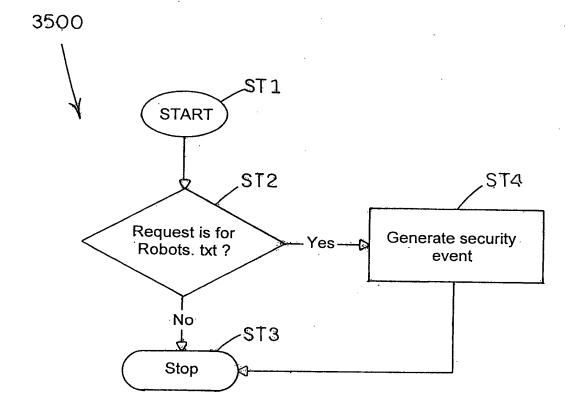


Fig · 35

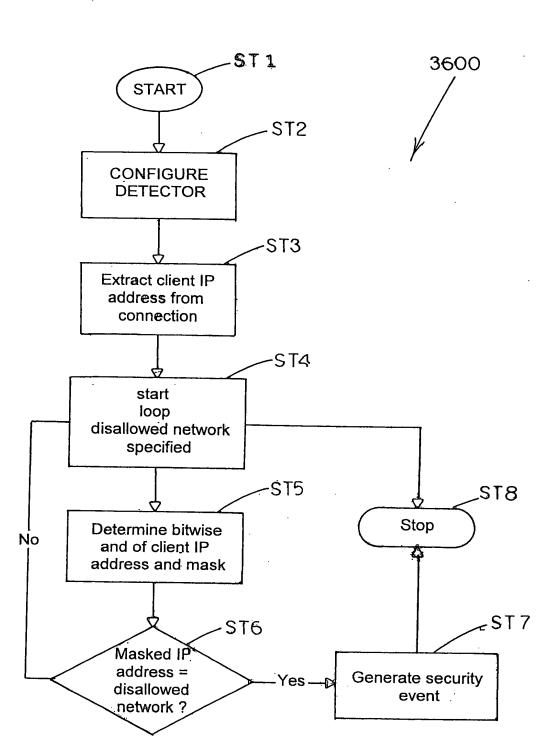


Fig · 36

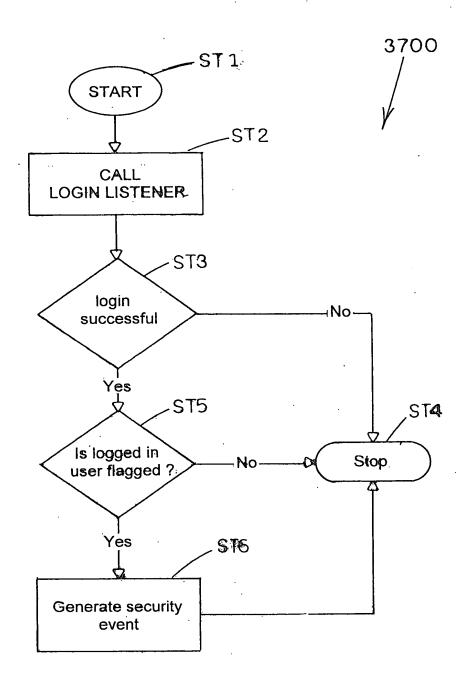


Fig. 37

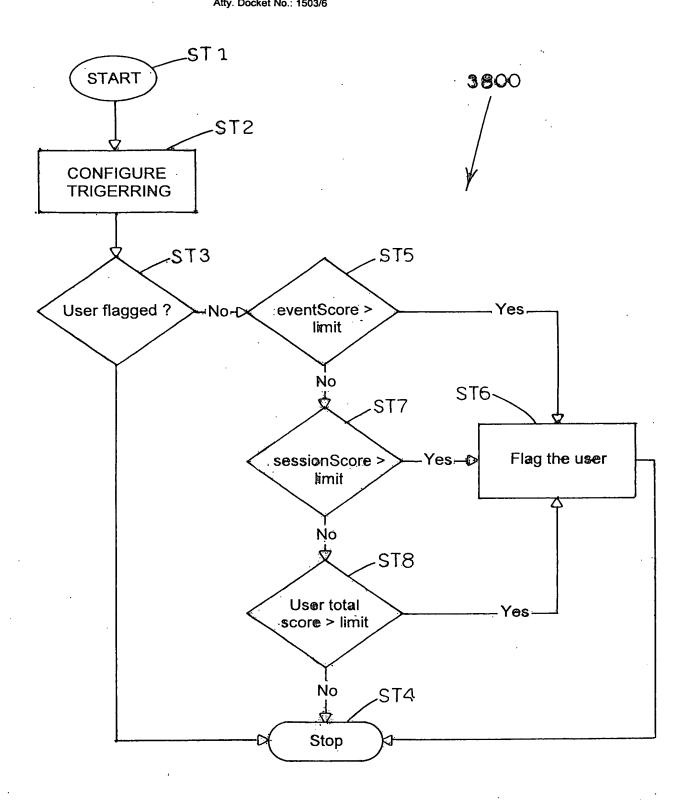
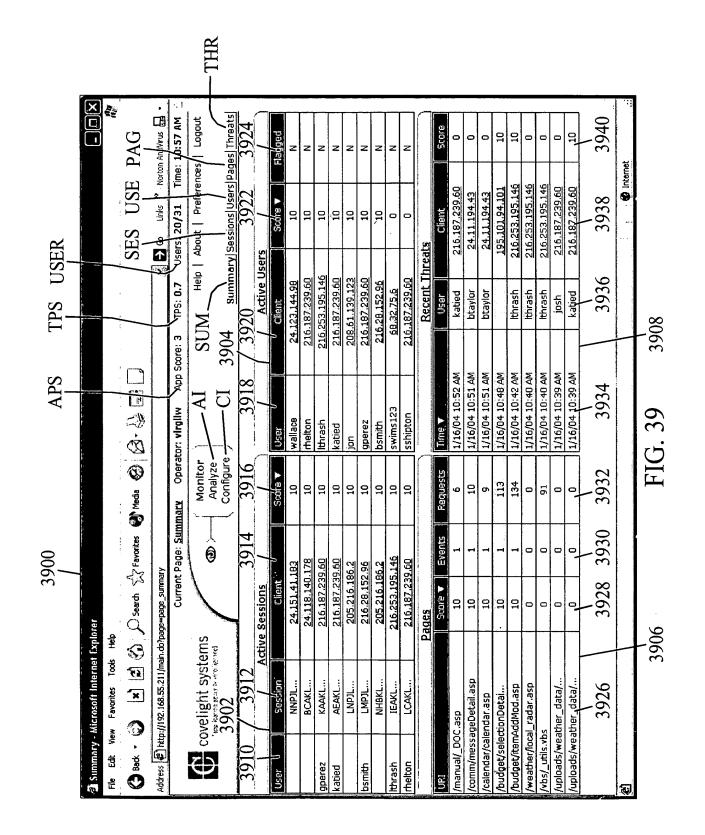


Fig · 38

SERVER APPLICATION
Applicant(s): Motsinger et al.
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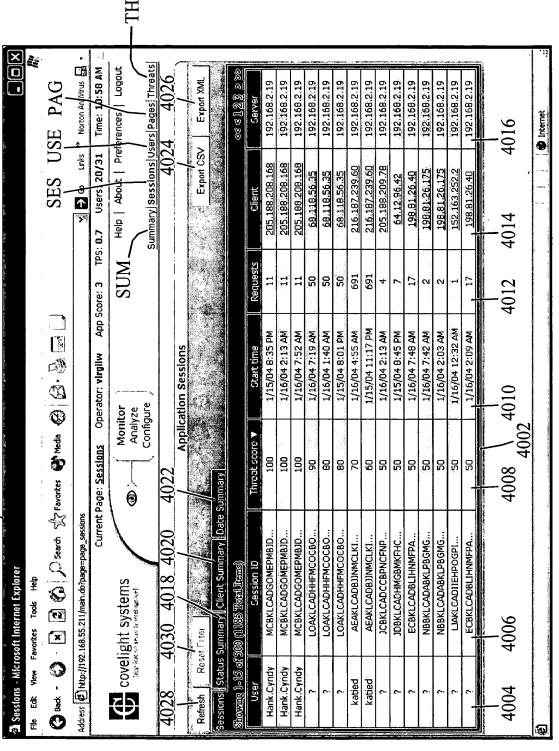


FIG. 40A

Atty. Docket No.: 1503/6

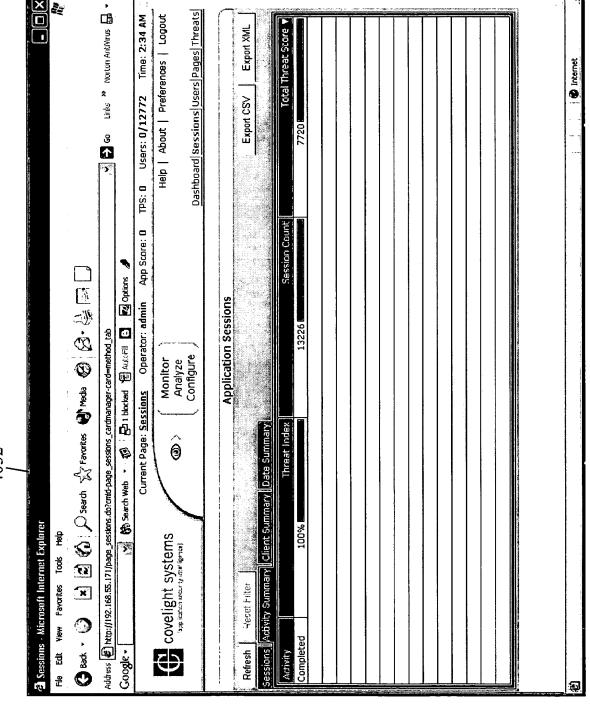


FIG. 40B

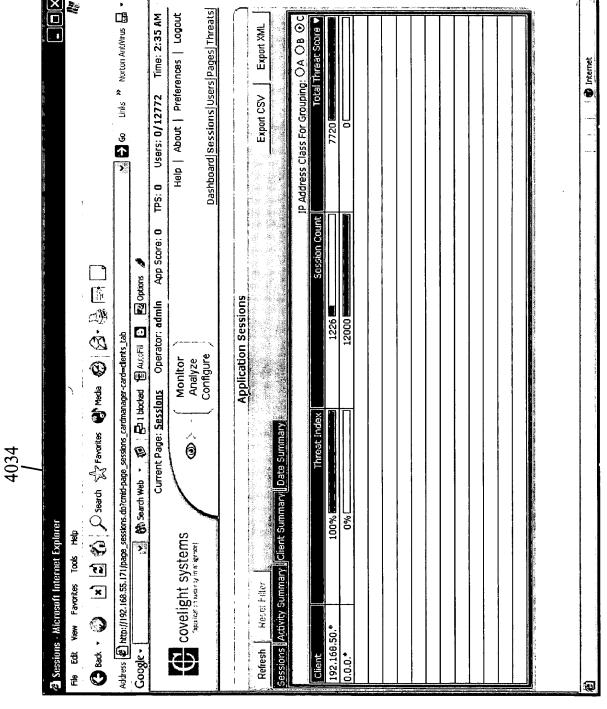


FIG. 40C

SERVER APPLICATION Applicant(s): Motsinger et al. Atty. Docket No.: 1503/6

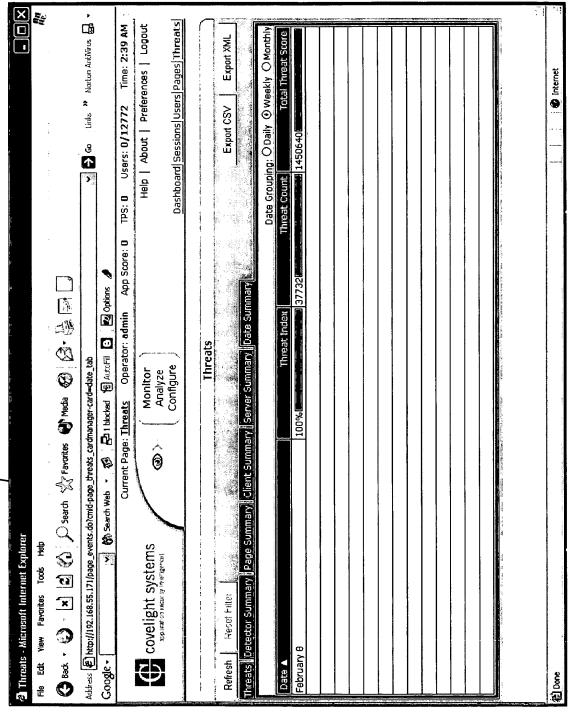


FIG. 40L

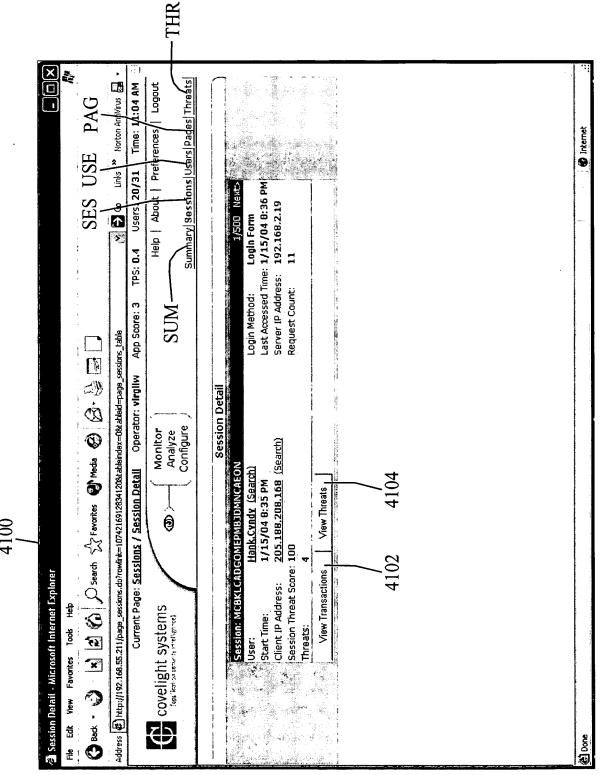
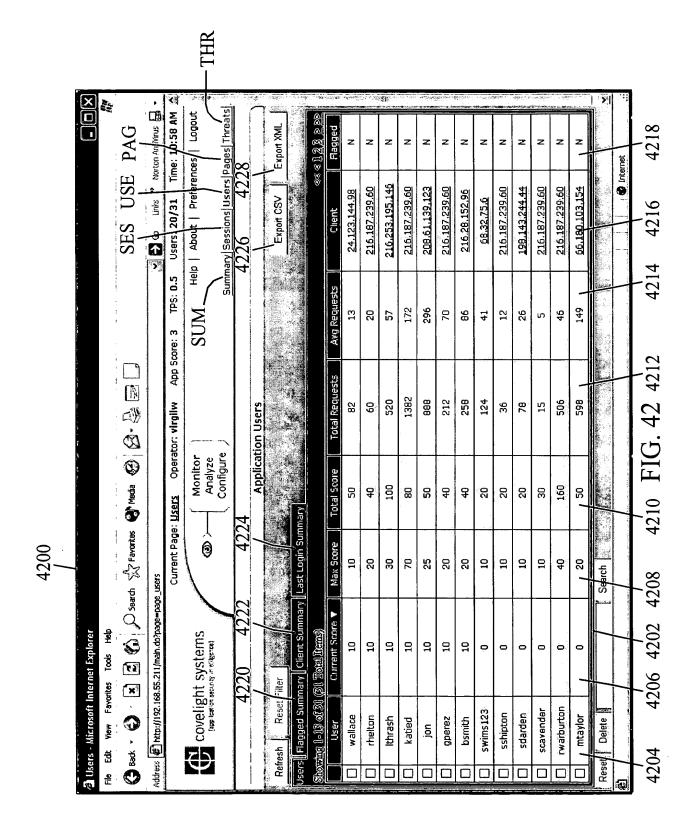


FIG 4

Applicant(s): Motsinger et al. Atty. Docket No.: 1503/6



Applicant(s): Motsinger et al. Atty. Docket No.: 1503/6

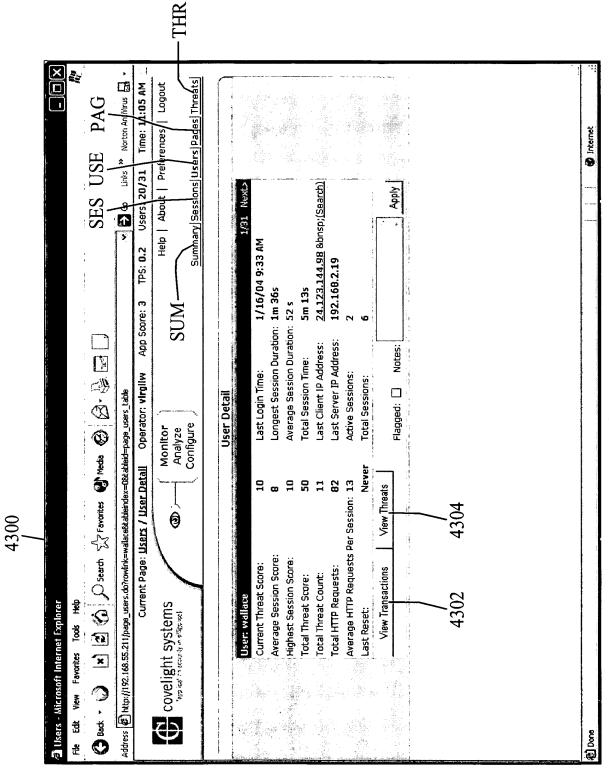
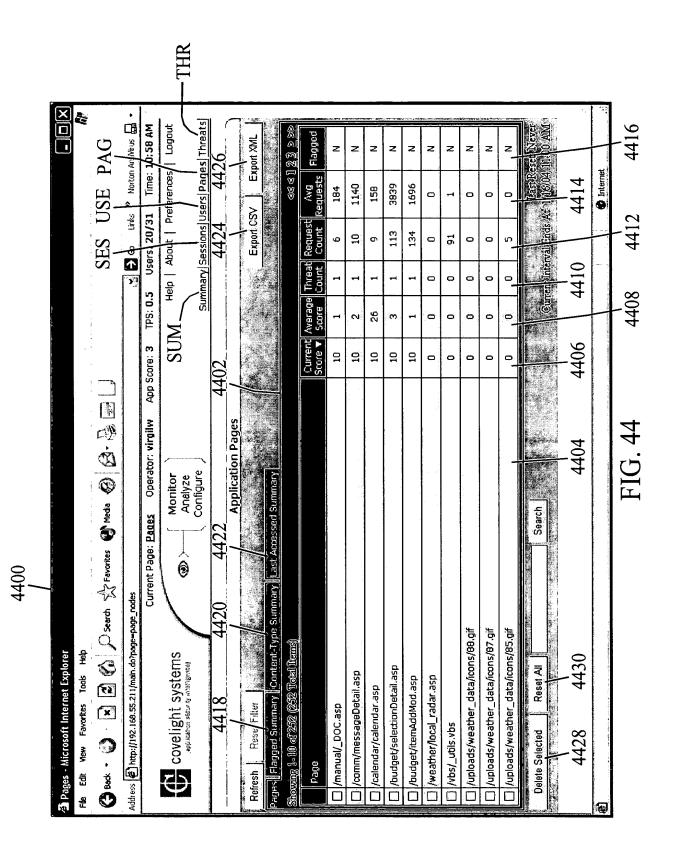


FIG. 43



THR X D Norton An Hirus Logout Summary | Sessions | Usérs | Pages | Threats Time: 1/1:05 AM PAG Help | About | Preferences/ SES USE 9 Links Users 20/31 Flagged: 🔲 Apply \* G Previous Interval Score: 10 Average Response Time: 0 TPS: 1.2 Interval Request Count: Interval Threat Count: Max Interval Score: Interval Score: App Score: 3 Address 🖨 http://192.168.55.211/page\_nodes.do?rowink=%2Fmanual%2F\_DOC.asp&kablaindex=0&kablaid=page\_nodes\_table A Dearth of Favorites of Media 60 18 18 18 18 Operator: virgilw Page Detail Monitor Analyze Configure Current Page: Pages / Page Detail Last Reset: Never Current Interval Ends At: 1/16/04 12:00 PM 1/16/04 10:16 AM text/html (Search) View Threats 0 Page: /manual/ DOC.asp Total Request Count: 88 View Transactions Total Threat Count: Average Score: Interval Count: Content-Type: Last Accessed: File Edit View Favorites Tools Help Covelight systems Total Score: ₹<u>2</u> <u>\*</u> 

FIG. 45

Applicant(s): Motsinger et al. Atty. Docket No.: 1503/6

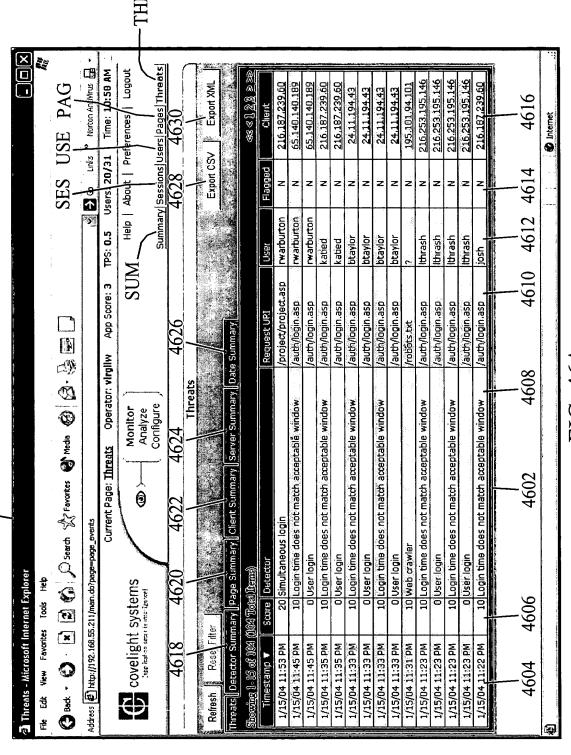


FIG. 46A

SERVER APPLICATION
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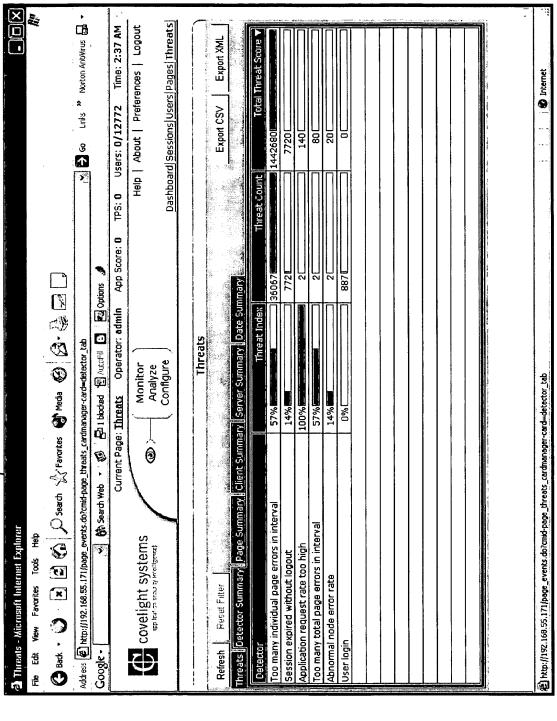


FIG. 46B

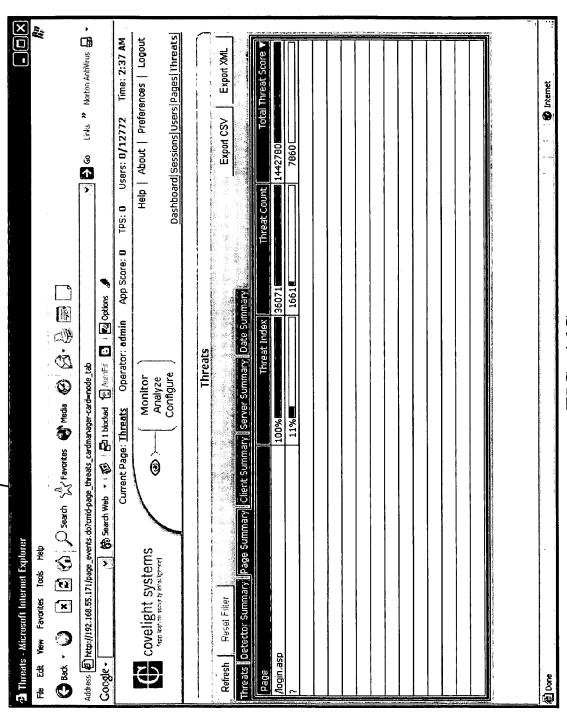


FIG. 46C

REPLACEMENT SHEET

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SERVER APPLICATION
Applicant(s): Motsinger et al.
Atty. Docket No.: 1503/6

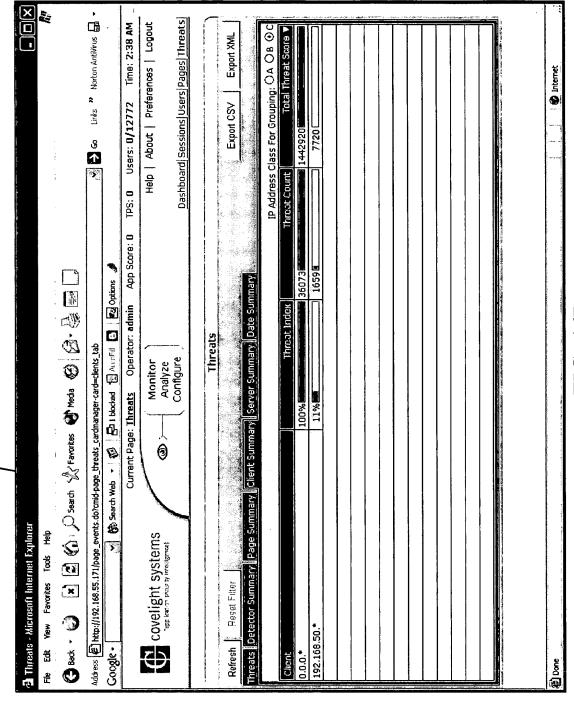


FIG. 46D

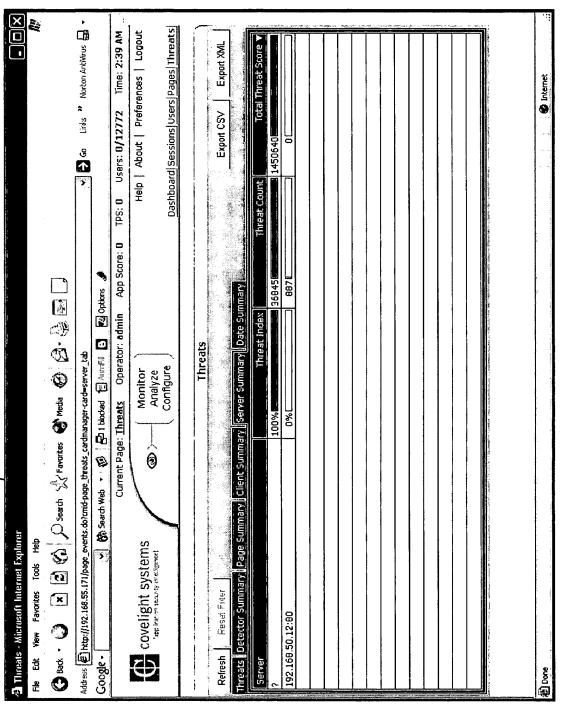


FIG. 46E

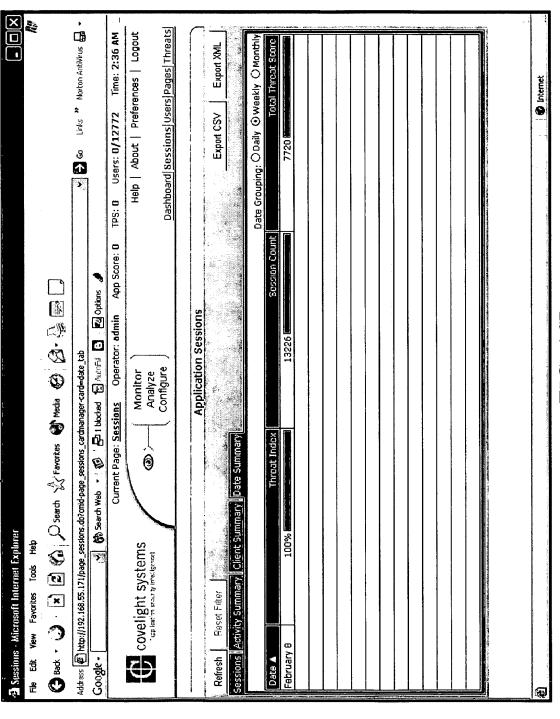
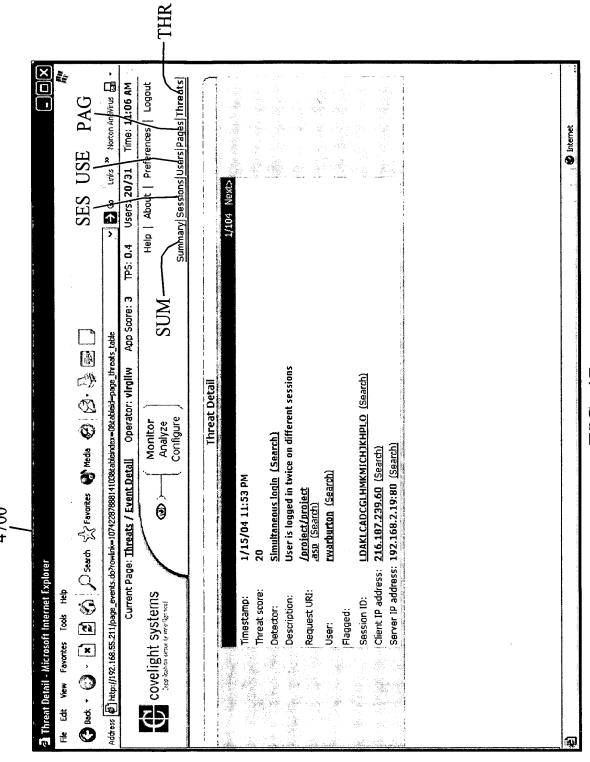


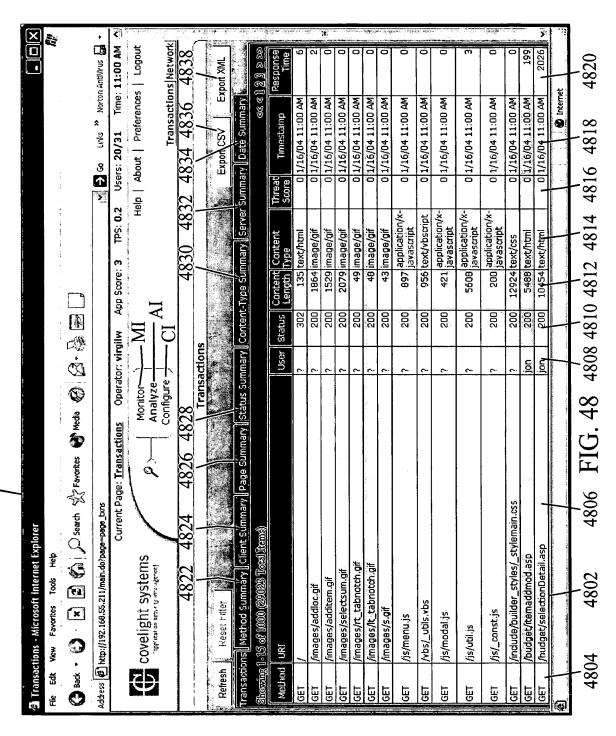
FIG. 46F



REPLACEMENT SHEET

Title: METHODS, SYSTEMS AND COMPUTER PROGRAM PRODUCTS FOR MONITORING A SERVER APPLICATION

Applicant(s): Motsinger et al. Atty. Docket No.: 1503/6



Time: 11:07 AM 🛆 > Transactions Network V S Co Links " Norton Antivirus Help | About | Preferences | Logout Ditemet Users: 20/31 192.168.2.19:80 (Search) cPrevious 19/1000 text/html (Search) 302 (Search) 175 TPS: 0.1 Server Response Time: 2.8 s Server IP Address: 192.1 501077459 560003098 600062400 650189281 App Score: 3 69 #3 False Save 🖸 🖒 Search 🞌 Favorites 😍 Meda 🔕 🙆 · 🐉 📳 🗌 Content Length: HTTP response: Address 🗗 http://192.166.55.211/page\_brns.do?row/ink=1074268810900384888kabbeindex=188kabbeid=page\_brns\_tabbe Content Type: Operator: virgliw Transaction Detail Parameters Monitor Analyze Configure Client IP Address: 66.180.103.154 (Search) Current Page: Iransactions / Iransaction Detail 1/16/04 11:00 AM Fransaction: 107426881090038488 /budget/itemAddM od.asp (Search) Į Q POST (Search) ? (Search) 1 (Search) 🔁 Transaction Detail - Microsoft Internet Explorer DeleteOneAttachment ngAttachmentsCount IngOldProjectId IngSelectionId ngLocationId File Edit View Favorites Tools Help covelight systems chkinventory xtItemDesc olnNewItem Session ID: ngEventId txtItemInfo Timestamp actionType strweblink oldItemID Method: temID × · pad Φ Done Done

FIG. 49

Users: 20/31 Time: 11:00 AM So Links " Norton AntiVirus Transactions Network Help | About | Preferences | Logout Internet Decoupling Buffer High Mark 25 100% Total HTIP Transactions 28996 Connection Open Count: 9498 Connection Close Count. 9494 Internal Operations Connections Decoupling Buffer Size Capture Omega Count: TPS: 1,3 App Score: 3 System Uptime: 0 days 18 hours 47 minutes 2 seconds 28996 Operator: virgliw がめ Monitor Analyze Configure 🗬 Back 🕶 🕓 - 💌 🔁 🖒 Search 🛠 Favorites 😍 Meda 🚱 Current Page: Stats ď 173.74 Mb 70.43 MB 2792512 Resumed SSL Session Count: New SSL Session Count SSL Session Cache Size: SSL Connection Count Address ( Http://192.168.55.211/main.do?nav=analysis Packets Packet Capture Count. TCP Fragment Count. 🗿 Network Stats - Microsoft Internet Explore SSL Packet Seen Count: Ingress Byte Count Egress Byte Count. File Edit View Favorites Tools Help Covelight systems Port 8 192,168,2,19

5000

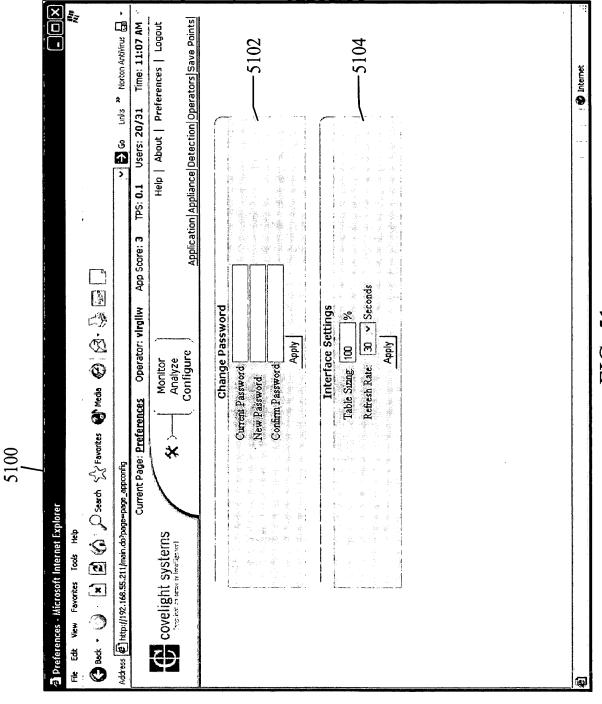


FIG. 5

X I Users: 20/31 Time: 11:10 AM --Application Appliance Detection Operators Save Points So Links " Norton Antivirus Help | About | Preferences | Logout Dinternet TPS: 0.3 App Score: 4 3 X 2 3 5 Search A Favorites Media 4 3. 4 1 1 HTTPS Port 443 윘 Apply and Reboot Sensor Operator: virgilw Address (2) http://192.168.55.211/page\_sensordg.do?cmid-page\_dgappilance\_cardmanager1-card=network\_tab HITP Port 88 Monitor Analyze Configure Primary DNS 192 **>** 5 Current Page: Appliance Gateway D Address Secondary DNS Netmask Enable Enable × SMTP Server File Edit View Favorites Tools Help Covelight systems 5202 Book . Control

FIG. 52

V S Go Links " Morton AntiVirus Application Appliance Detection Operators Save Points Users: 23/31 Time: 11:28 AM Help | About | Preferences | Logout Internet TPS: 1.7 Current Page: Appliance Operator: virgilw App Score: 4 From Address anonymous@invalid.com X 2 6 D Search M Favorites Media 6 6 6 . B 1 Address (2) http://192.166.55.211/page\_sensordg.do?cmid-page\_cfgappiance\_cardmanager1-card=smtpserversettings\_lab From Name | Covelight Sensor mail invalid com Apply Monitor Analyze Configure Enable Pop before send SMTP Server Password Username × Time Firmware SMTP Server 🔁 Appliance - Microsoft Internet Explore File Edit View Favorites Tools Help covelight systems ③ • yag **②** Control

FIG. 53

REPLACEMENT SHEET
Title: METHODS, SYSTEMS AND COMPUTER
PROGRAM PRODUCTS FOR MONITORING A
SERVER APPLICATION

Applicant(s): Motsinger et al. Atty. Docket No.: 1503/6

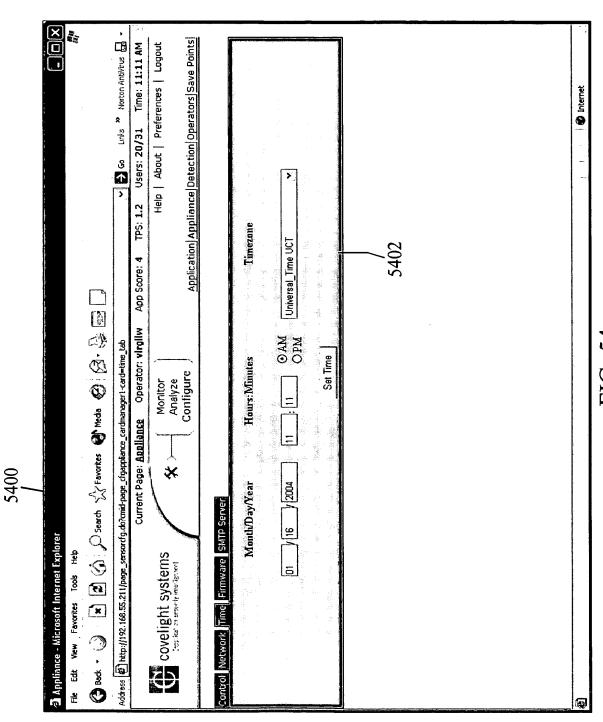
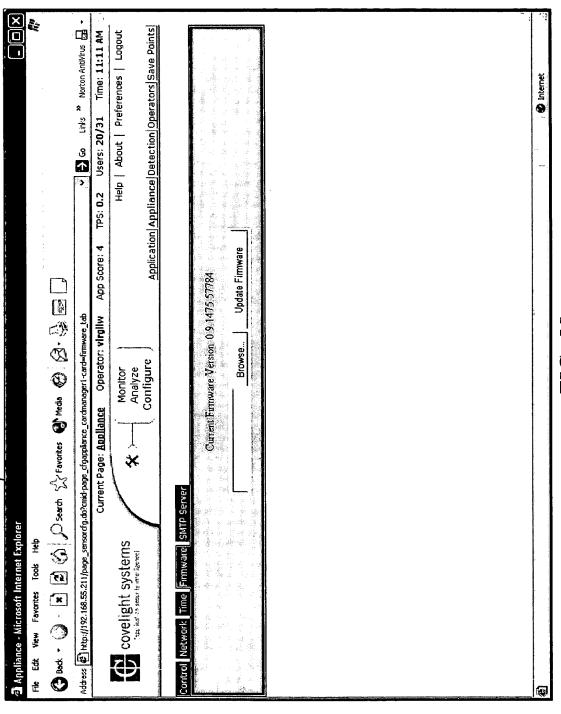


FIG. 54

REPLACEMENT SHEET
Title: METHODS, SYSTEMS AND COMPUTER
PROGRAM PRODUCTS FOR MONITORING A
SERVER APPLICATION

Applicant(s): Motsinger et al. Atty. Docket No.: 1503/6



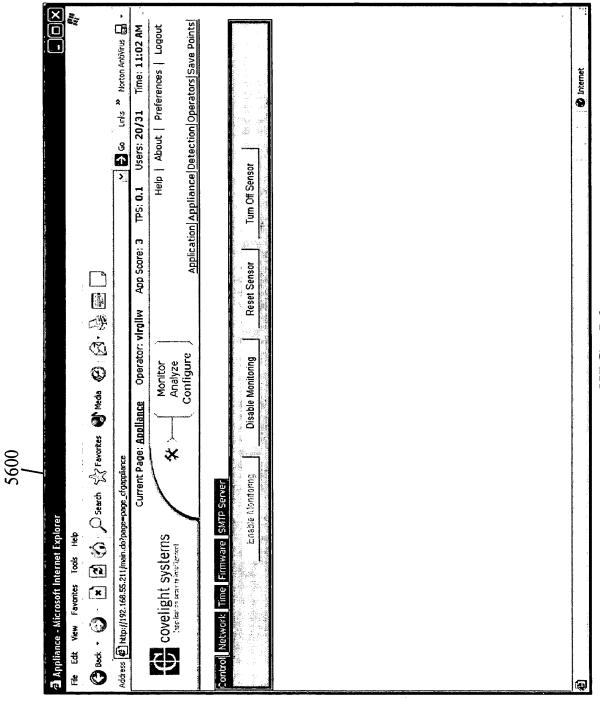


FIG. 56

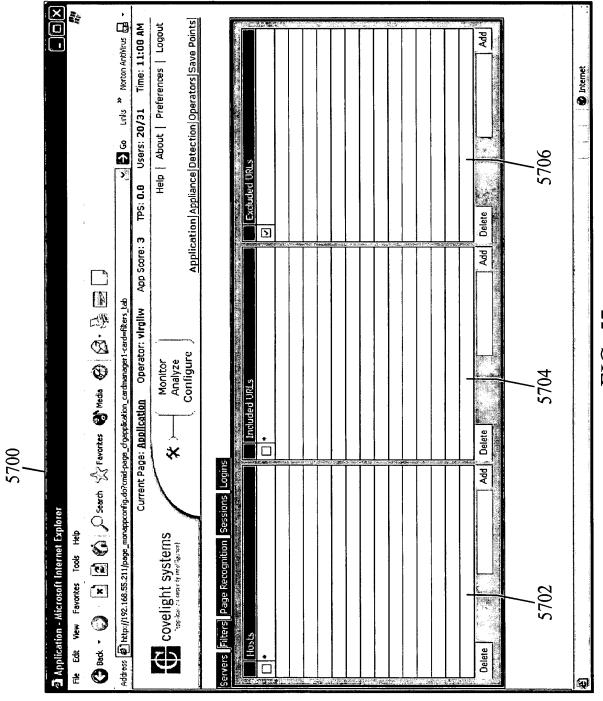
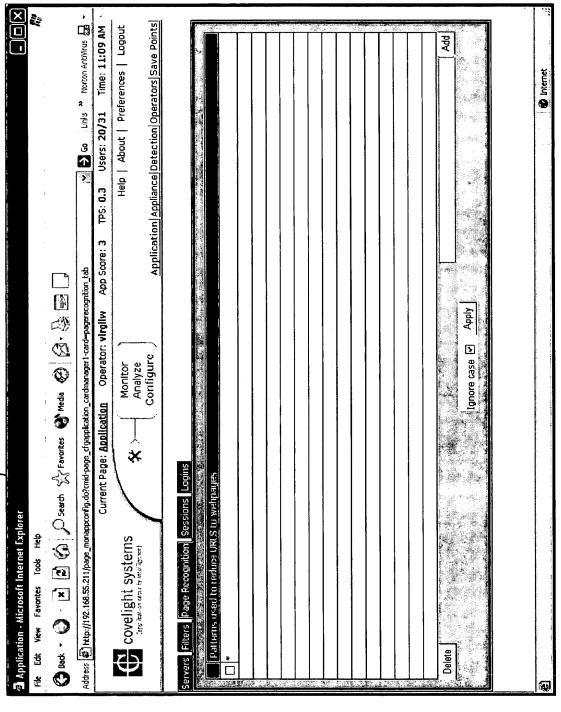


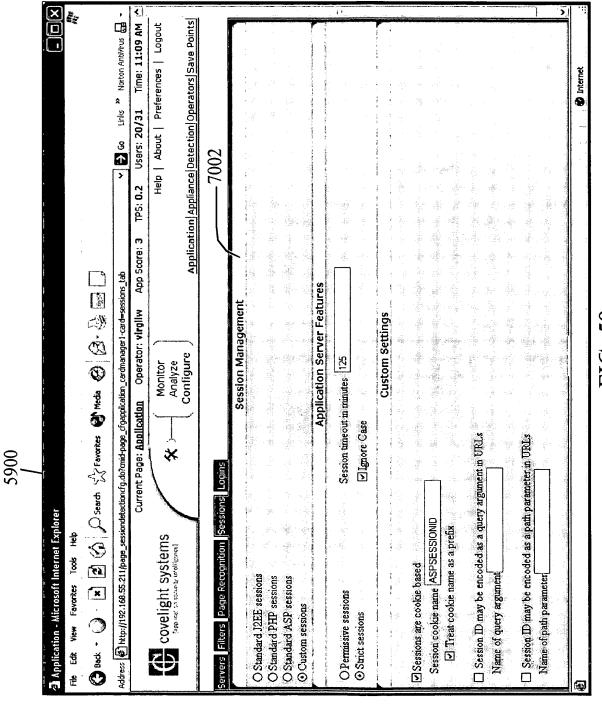
FIG. 57



2800

FIG. 58

Atty. Docket No.: 1503/6



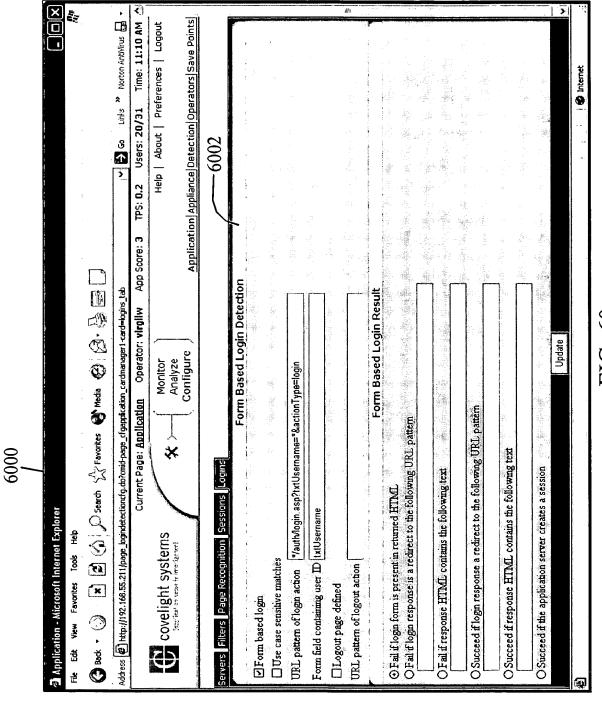
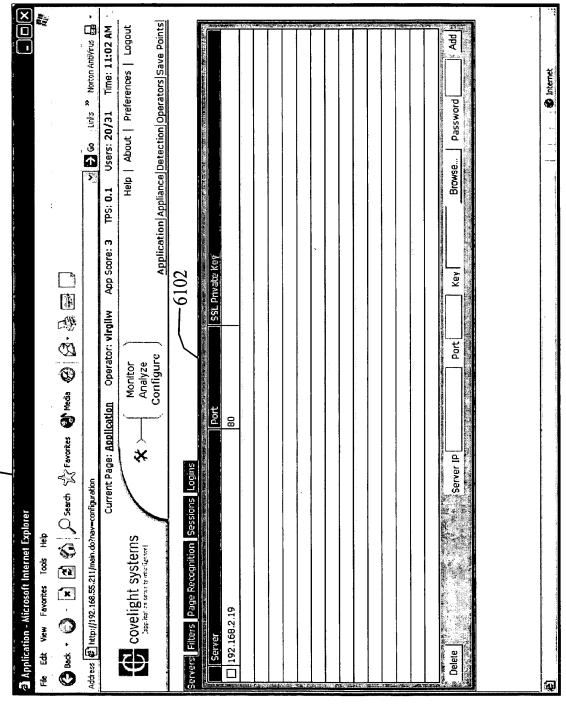
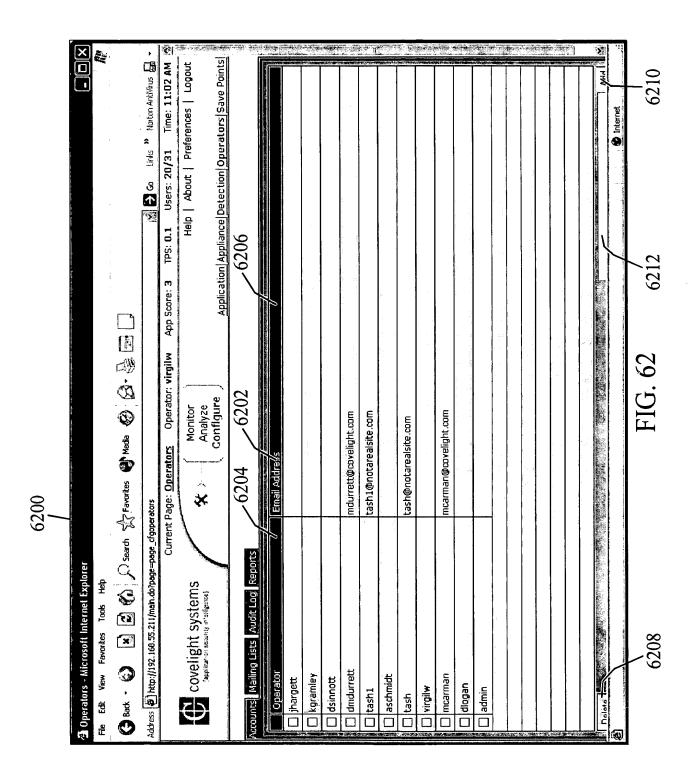


FIG. 60

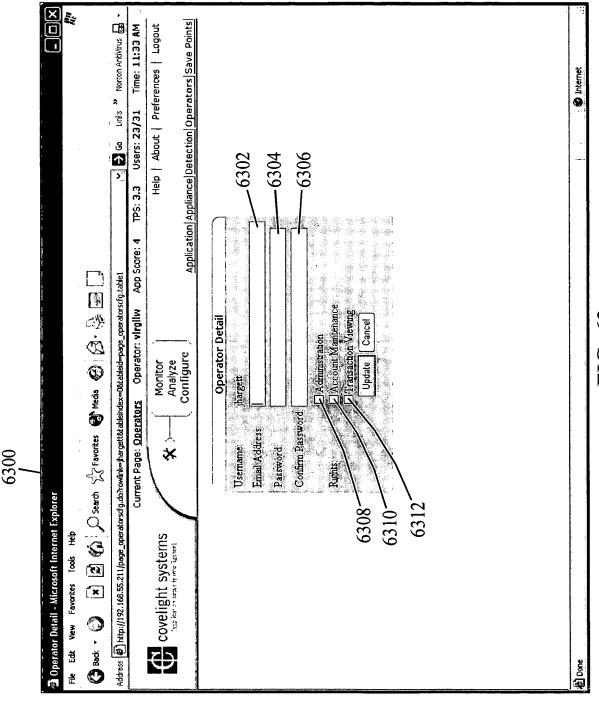


Atty. Docket No.: 1503/6



REPLACEMENT SHEET
Title: METHODS, SYSTEMS AND COMPUTER
PROGRAM PRODUCTS FOR MONITORING A
SERVER APPLICATION
Applicant(s): Metalogue

Applicant(s): Motsinger et al. Atty. Docket No.: 1503/6



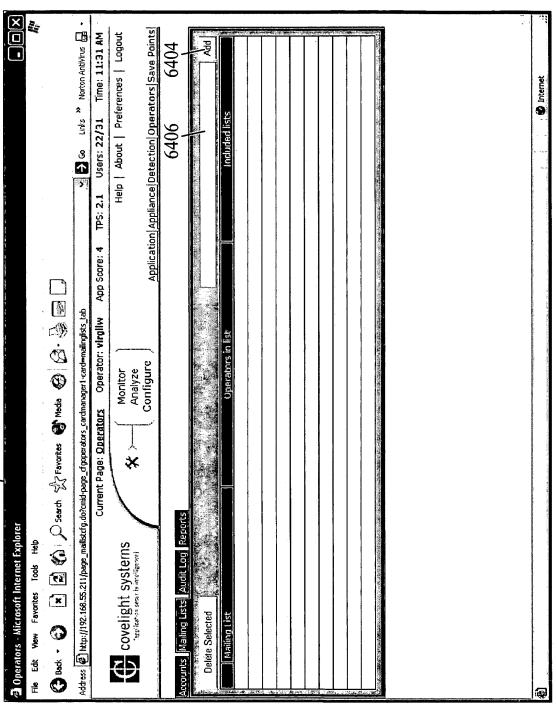


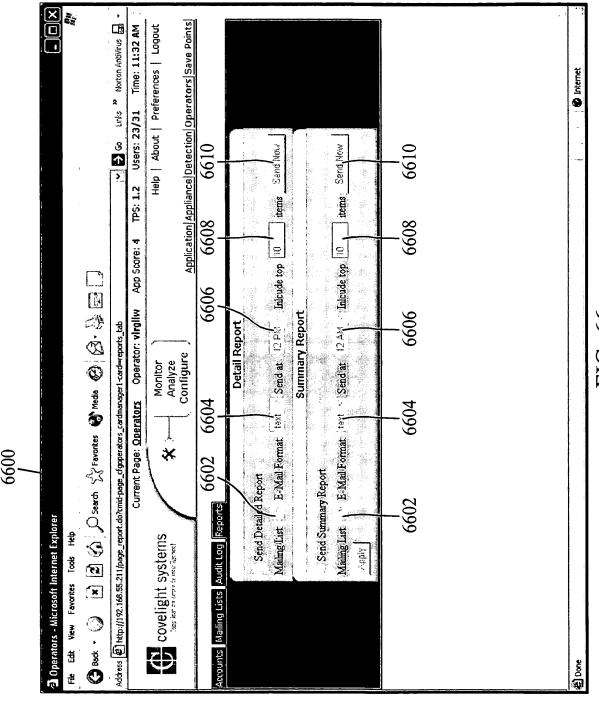
FIG. 64

REPLACEMENT SHEET
Title: METHODS, SYSTEMS AND COMPUTER
PROGRAM PRODUCTS FOR MONITORING A
SERVER APPLICATION

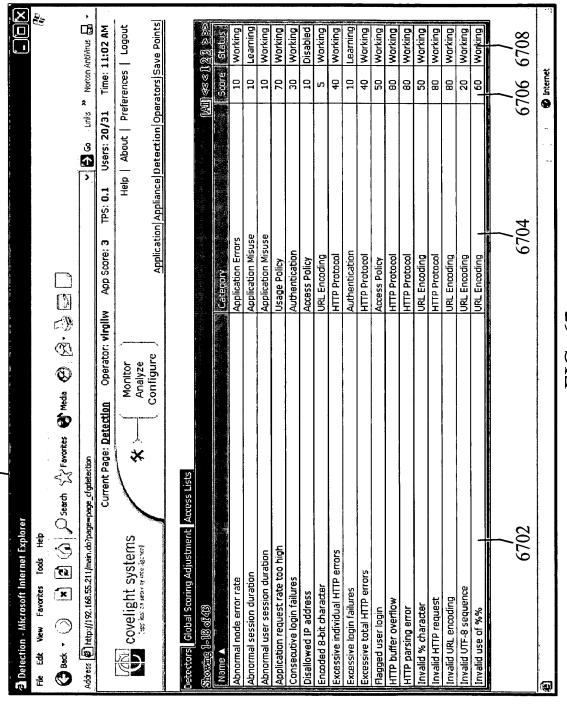
Applicant(s): Motsinger et al. Atty. Docket No.: 1503/6

× • 44 So Links " Norton AntiVirus Application | Appliance | Detection | Operators | Save Points Time: 11:32 AM Help | About | Preferences | Logout Export XML 6514 dmdurrett dmdurrett dmdurrett dmdurrett dmdurrett dmdurrett dmdurrett jhargett virgil₩ virgil¥ virgilw virgil¥ virgilw ×ات virgil¥ admin D Internet Users: 22/31 Explor CSV 6508 6512 192,168,55,101 192.168.55.17 192,168,55,17 192,168,55,101 92,168,55,10 69.132.60.166 192,168,55,10 192,168,55,17 92,168,55,10 192.168.55.10 65.81.86.237 192.168.55.17 65.81.86.237 65,81,86,237 65.81.86.237 65.81.86.237 65.01.06.237 TPS: 2.9 Current Page: Operators Operator: virgiliw App Score: 4 \* Search K Favorites \* Media & K. W. W. W. Address 🗗 http://192.166.55.211/page\_operatorscfg.do?cmid-page\_cfgoperators\_cardmanager1-card=auditog\_tab Monitor Analyze Configure Changed operator virgilw refresh rate to 30 Changed operator virgilw refresh rate to 30 **\*** Login denied for admin Reports ogout successfu Login successful nussacons uibor Login successful Login successful Login successful ogin successful Login successful ogin successful ogin successful ogin successful ogin successful Login successful Login successful Login successfu 🔁 Operators - Microsoft Internet Explorer File Edit View Favorites Tools Help Covelight systems Audit Lag Mailing Lists 1/16/04 10:57 AM 1/16/04 10:11 AM 1/16/04 11:28 AM 1/16/04 10:11 AM 1/16/04 9:26 AM 1/16/04 8:47 AM 1/16/04 8:47 AM 1/16/04 8:17 AM 1/16/04 7:37 AM 1/15/04 7:34 PM 1/15/04 7:34 PM 1/15/04 7:14 PM 1/15/04 6:34 PM 1/15/04 6:04 PM 1/15/04 5:46 PM 1/16/04 9:30 AM 1/16/04 9:27 AM 1/15/04 5:24 PM ① · yog ② Date Refresh-Accounts

FIG 64



Atty. Docket No.: 1503/6



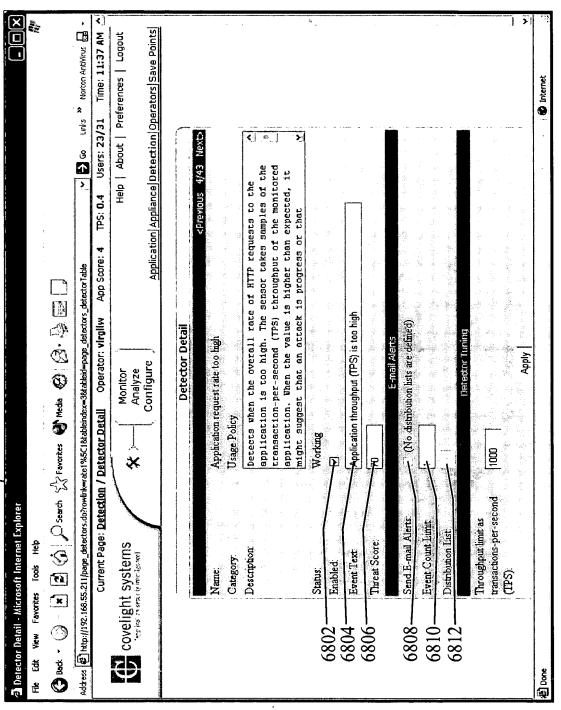
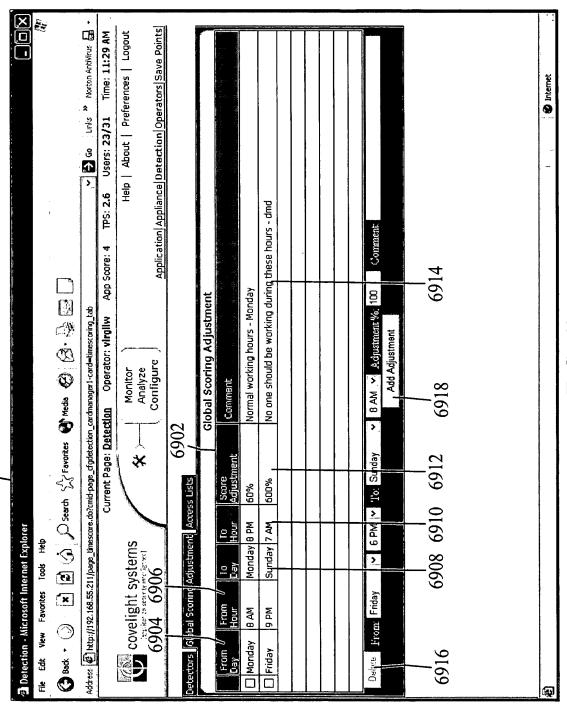


FIG. 68



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Applicant(s): Motsinger et al. Atty. Docket No.: 1503/6

